

Compal Confidential

KAL90 M/B Schematics Document

Intel Penryn Processor with Cantiga + DDRII + ICH9M

2008-10-30

REV:1.0

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Issued Date	2008/03/28	Deciphered Date	2008/09/20	Title	SCHEMATIC,A4491	
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Voltage Rails

Power Plane	Description	S1	S3	S5
VIN	Adapter power supply (19V)	N/A	N/A	N/A
B+	AC or battery power rail for power circuit.	N/A	N/A	N/A
+CPU_CORE	Core voltage for CPU	ON	OFF	OFF
+0.9VS	0.9V switched power rail for DDR terminator	ON	OFF	OFF
+1.05VS	1.05V switched power rail	ON	OFF	OFF
+1.25VS	1.25V switched power rail	ON	OFF	OFF
+1.5V	1.5V power rail for HDA	ON	ON	OFF
+1.5VS	1.5V switched power rail	ON	OFF	OFF
+1.8V	1.8V power rail for DDR	ON	ON	OFF
+1.8VS	1.8V switched power rail	ON	OFF	OFF
+1.1VS	1.1V switched power rail	ON	OFF	OFF
+3VALW	3.3V always on power rail	ON	ON	ON*
+3V	3.3V power rail for SB	ON	ON	X
+3V_LAN	3.3V power rail for LAN	ON	ON	X
+3VS	3.3V switched power rail	ON	OFF	OFF
+5VALW	5V always on power rail	ON	ON	ON*
+5VS	5V switched power rail	ON	OFF	OFF
+VSB	VSB always on power rail	ON	ON	ON*
+RTCVCC	RTC power	ON	ON	ON
+VGA_CORE	Core voltage for GPU	ON	OFF	OFF

Note : ON* means that this power plane is ON only with AC power available, otherwise it is OFF.

External PCI Devices

Device	IDSEL#	REQ#/GNT#	Interrupts

EC SM Bus1 address

Device	Address
Smart Battery	0001 011X b
MEDIA CONSOLE	1010 000X b

EC SM Bus2 address

Device	Address
ADI ADT7421	1001 100X b
NB9M THERMAL SENSOR	

ICH9M SM Bus address

Device	Address
Clock Generator (ICS9LPRS387, SLG8SP556V)	1101 001Xb
DDR DIMM0	1001 000Xb
DDR DIMM2	1001 010Xb

STATE	SIGNAL	SLP_S1#	SLP_S3#	SLP_S4#	SLP_S5#	+VALW	+V	+VS	Clock
Full ON		HIGH	HIGH	HIGH	HIGH	ON	ON	ON	ON
S1(Power On Suspend)		LOW	HIGH	HIGH	HIGH	ON	ON	ON	LOW
S3 (Suspend to RAM)		LOW	LOW	HIGH	HIGH	ON	ON	OFF	OFF
S4 (Suspend to Disk)		LOW	LOW	LOW	HIGH	ON	OFF	OFF	OFF
S5 (Soft OFF)		LOW	LOW	LOW	LOW	ON	OFF	OFF	OFF

Board ID / SKU ID Table for AD channel

Vcc	3.3V +/- 5%			
Ra/Rc/Re	100K +/- 5%			
Board ID	Rb / Rd / Rf	VAD_BID min	VAD_BID typ	VAD_BID max
0	0	0 V	0 V	0 V
1	8.2K +/- 5%	0.216 V	0.250 V	0.289 V
2	18K +/- 5%	0.436 V	0.503 V	0.538 V
3	33K +/- 5%	0.712 V	0.819 V	0.875 V
4	56K +/- 5%	1.036 V	1.185 V	1.264 V
5	100K +/- 5%	1.453 V	1.650 V	1.759 V
6	200K +/- 5%	1.935 V	2.200 V	2.341 V
7	NC	2.500 V	3.300 V	3.300 V

BOARD ID Table

Board ID	PCB Revision
0	0.1
1	0.2
2	0.3
3	1.0
4	1A
5	
6	
7	

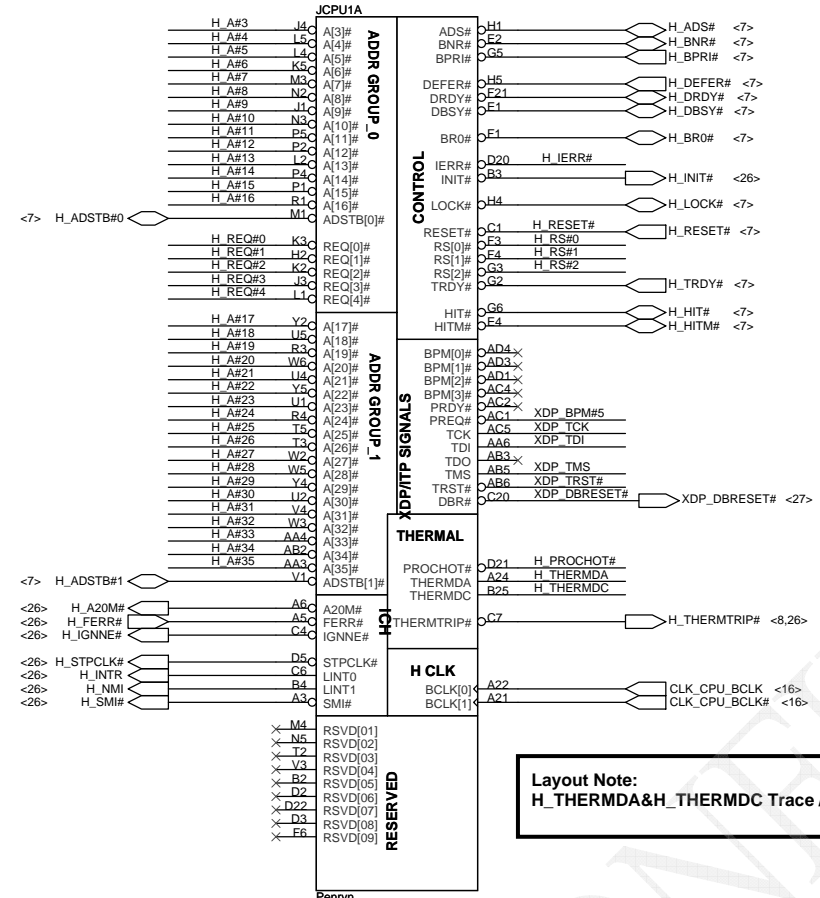
BTO Option Table

BTO Item	BOM Structure
JAL90	JAL90@
JAW50	JAW50@
UMA	GM@
JAL90-UMA	JAL90GM@
JAW50	GLPM@
Discrete	PM@
Discrete	888VC@
ALC888VC	888VB@
ALC888VB	8121@
AR8121	8112@
AR8112	268@
ALC268	

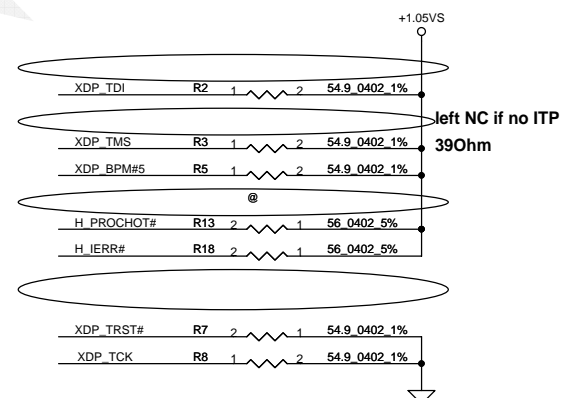
BOM Configuration Table

Project	BOM Configuration
KAL90-UMA	XXXXXXXXXX:JAL90GM@/JAL90@/GM@/888VC@/8121@/ESATA@
KAL90-Dis	XXXXXXXXXX:PM@/JAL90@/GLPM@/888VC@/8121@/ESATA@

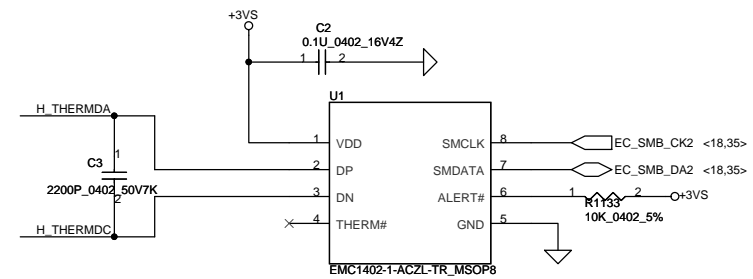
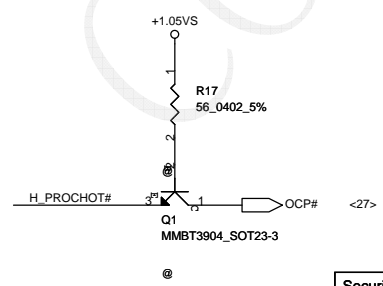
<7> H_A#[3..35] H_A#[3..35]
 <7> H_REQ#[0..4] H_REQ#[0..4]
 <7> H_RS#[0..2] H_RS#[0..2]



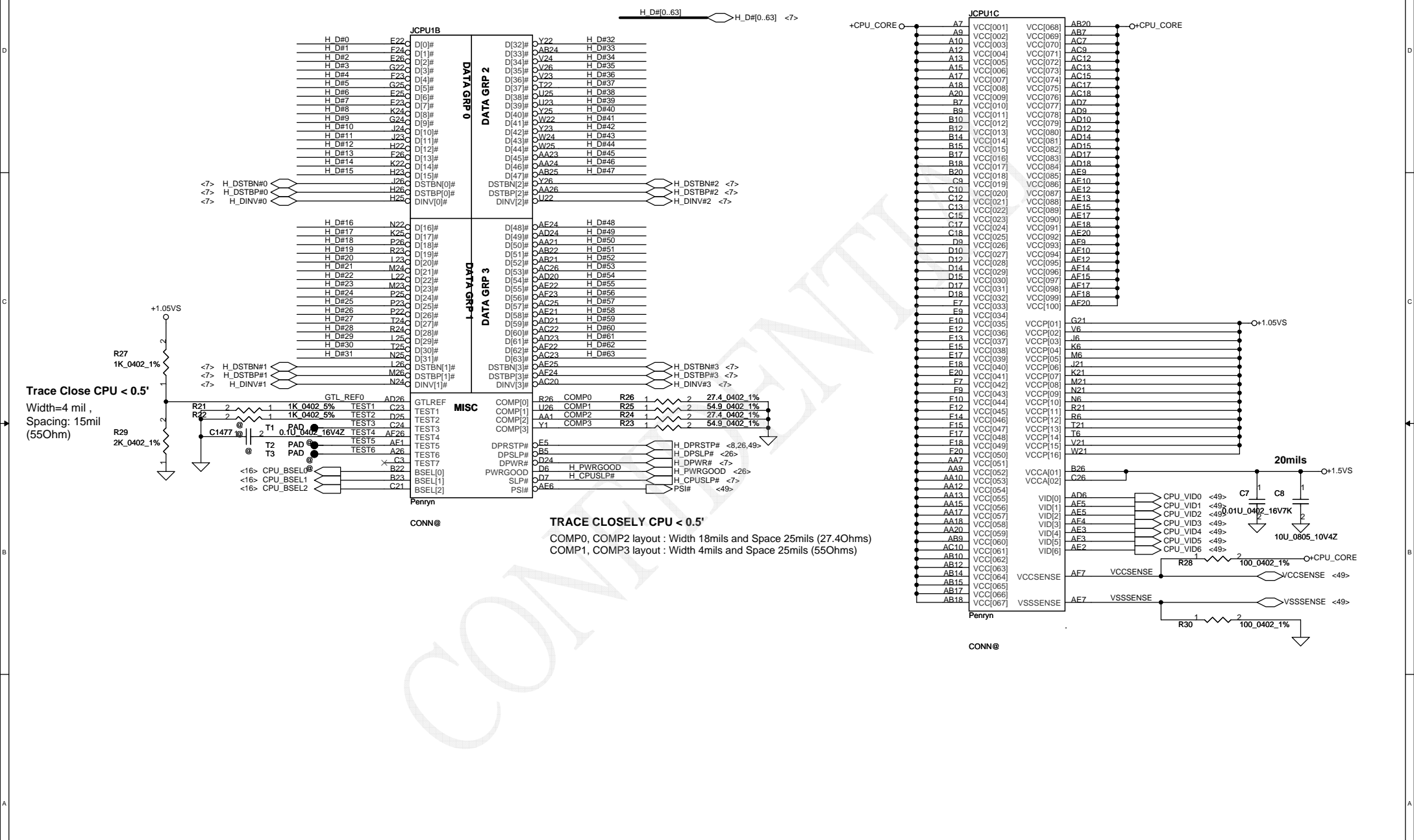
Layout Note:
 H_THERMDA&H_THERMDC Trace / Space = 10 / 10 mil



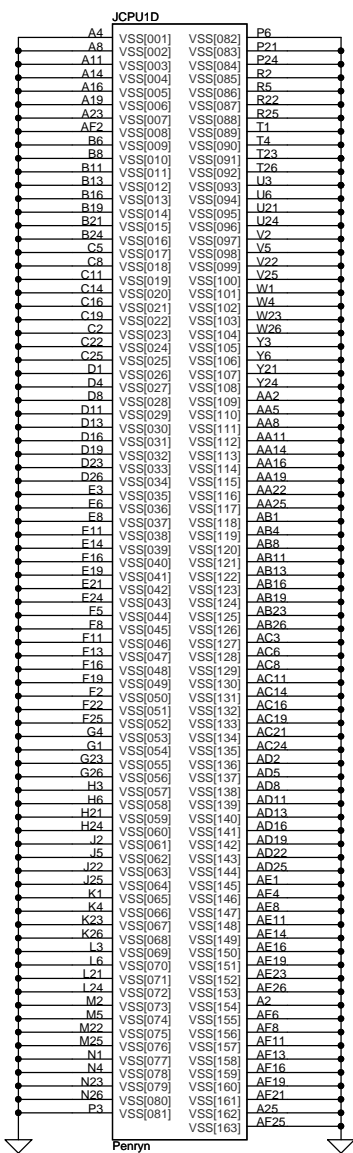
BSEL2	BSEL1	BSEL0	BCLK
0	0	0	266
0	1	0	200
0	1	1	166



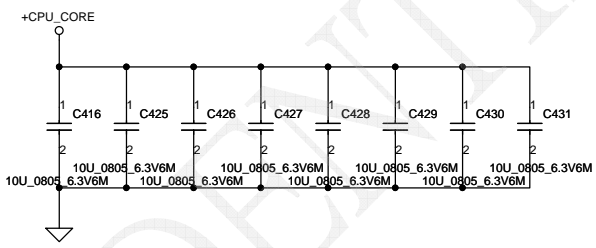
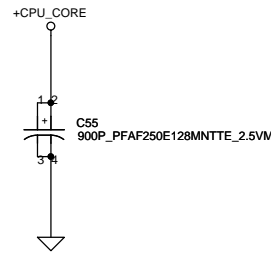
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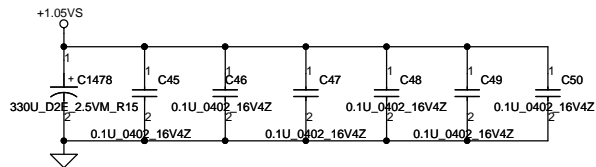
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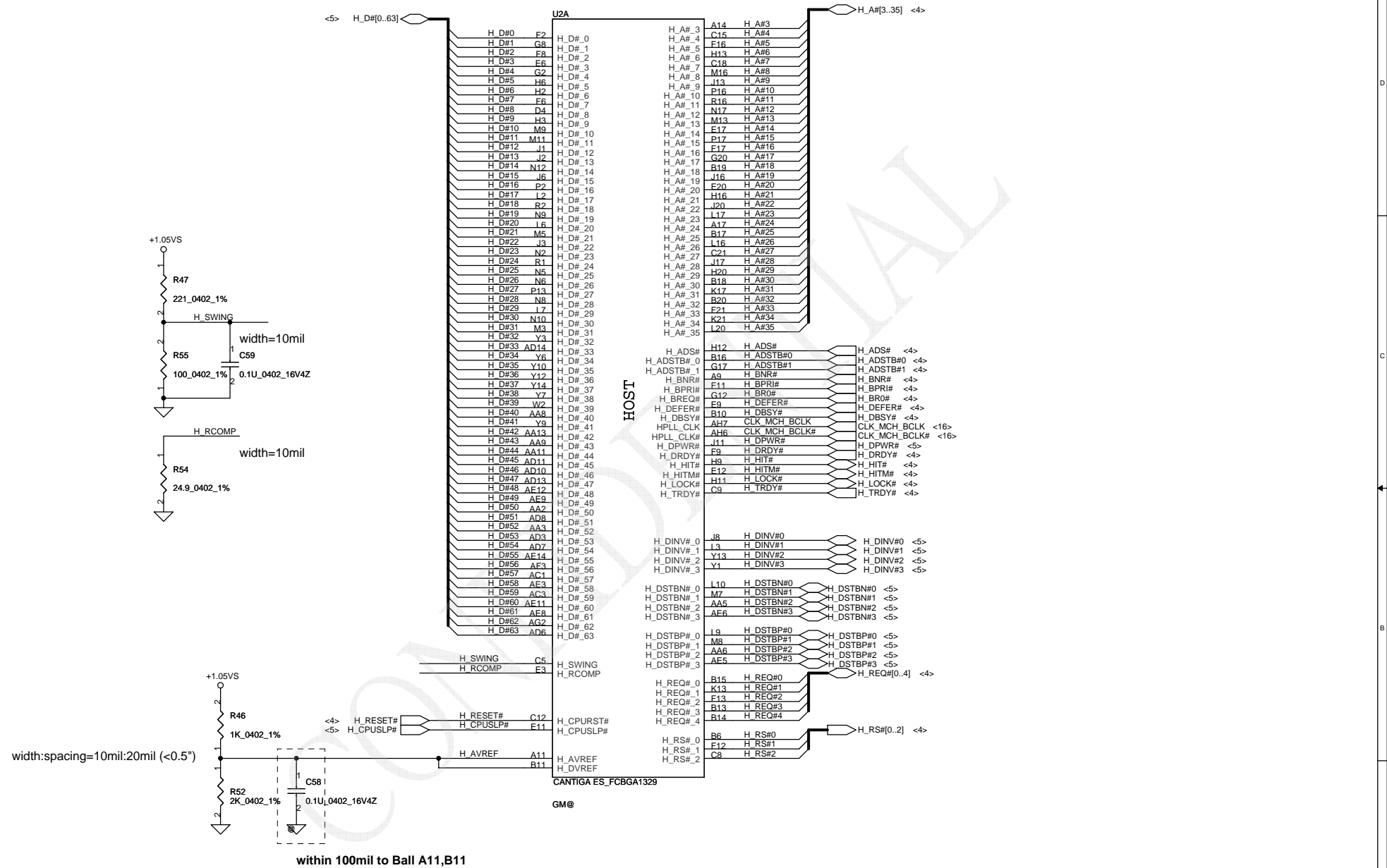


CONN@

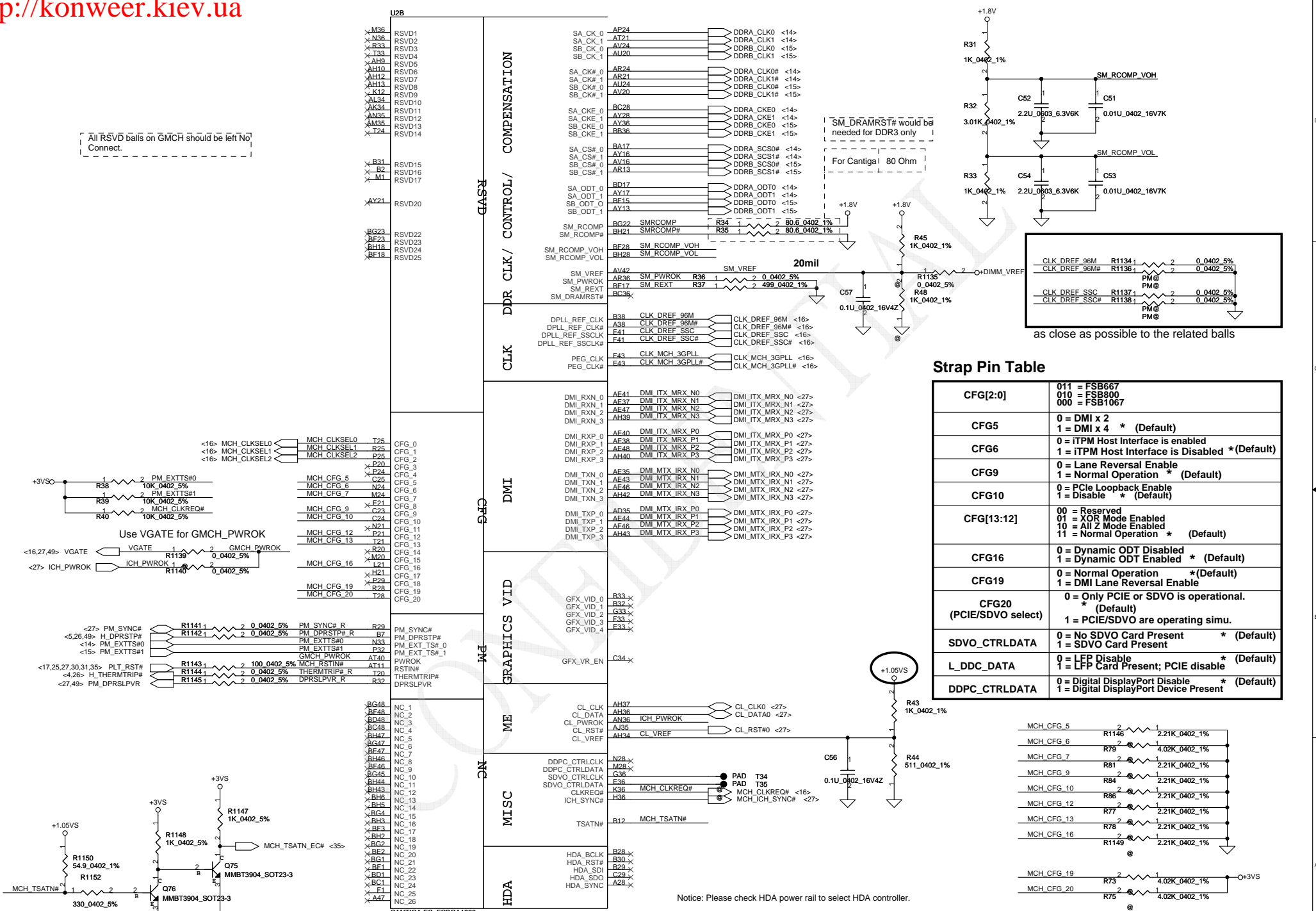


+CPU-CORE Decoupling	C,uF	ESR, mohm	ESL,nH
SPCAP, Polymer	4X330uF	6m ohm/4	1.8nH/6
MLCC 0805 X5R	32X22uF	3m ohm/32	0.6nH/32
	32X10uF	3m ohm/32	0.6nH/32



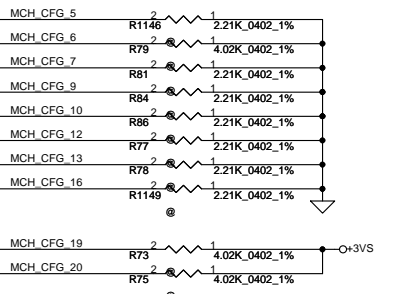


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Strap Pin Table

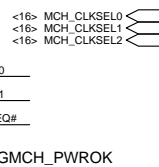
CFG[2:0]	011 = FSB667 010 = FSB800 000 = DMI x 4
CFG5	0 = DMI x 2 1 = DMI x 4 * (Default)
CFG6	0 = iTPM Host Interface is enabled 1 = iTPM Host Interface is Disabled * (Default)
CFG9	0 = Lane Reversal Enable 1 = Normal Operation * (Default)
CFG10	0 = PCIe Loopback Enable 1 = Disable * (Default)
CFG[13:12]	00 = Reserved 01 = XOR Mode Enabled 10 = All Z Mode Enabled 11 = Normal Operation * (Default)
CFG16	0 = Dynamic ODT Disabled 1 = Dynamic ODT Enabled * (Default)
CFG19	0 = Normal Operation * (Default) 1 = DMI Lane Reversal Enable
CFG20 (PCIe/SDVO select)	0 = Only PCIe or SDVO is operational. (Default) 1 = PCIe/SDVO are operating simu.
SDVO_CTRLDATA	0 = No SDVO Card Present * (Default) 1 = SDVO Card Present
L_DDC_DATA	0 = LFP Disable 1 = LFP Card Present; PCIe disable * (Default)
DDPC_CTRLDATA	0 = Digital DisplayPort Disable * (Default) 1 = Digital DisplayPort Device Present



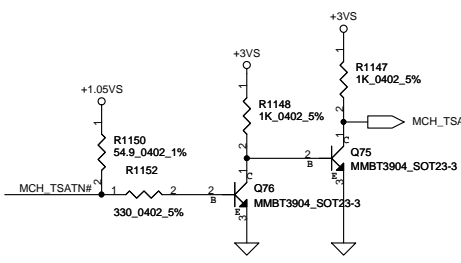
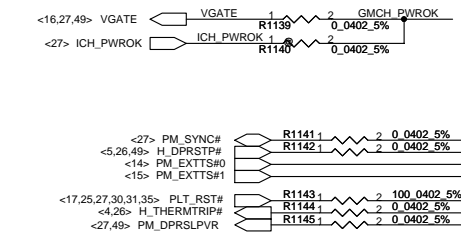
Notice: Please check HDA power rail to select HDA controller.

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All RSVD balls on GMCH should be left No Connect.

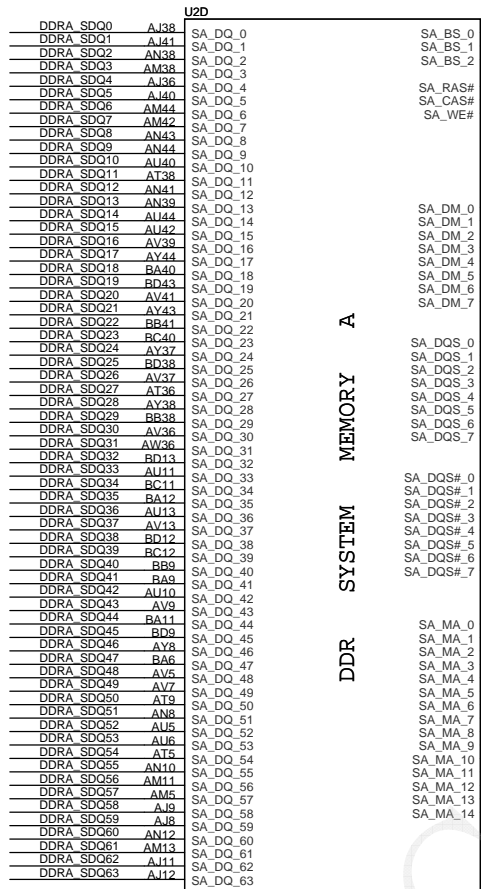


Use VGATE for GMCH_PWROK



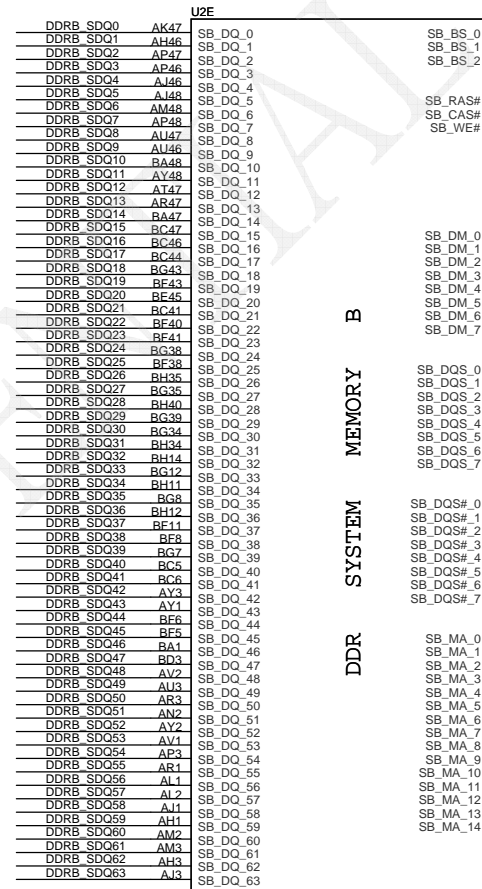
CANTIGA ES_FCBGA1329

GM@



DDR SYSTEM MEMORY A

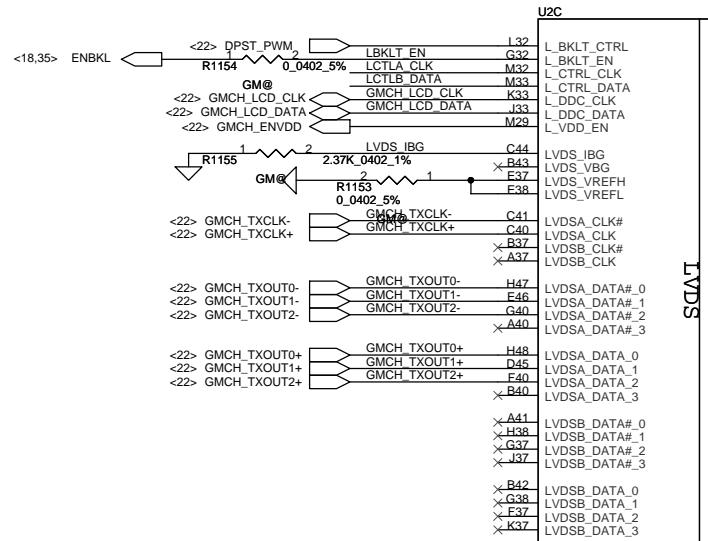
CANTIGA ES_FCBGA1329 GM@



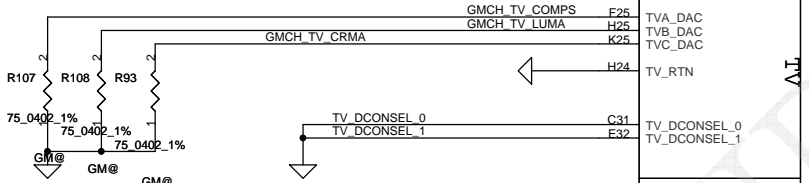
DDR SYSTEM MEMORY B

CANTIGA ES_FCBGA1329 GM@

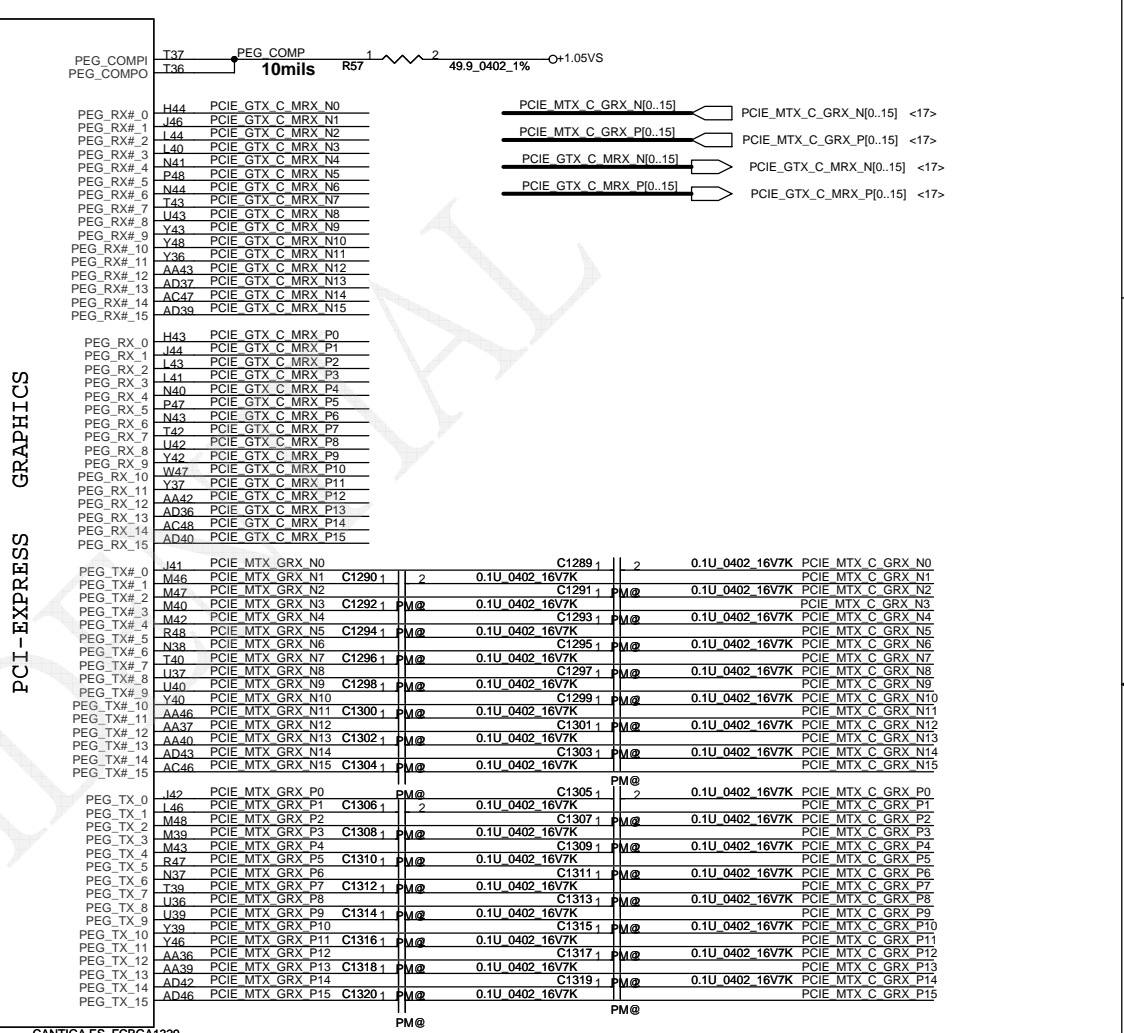
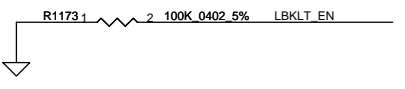
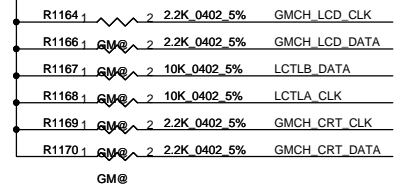
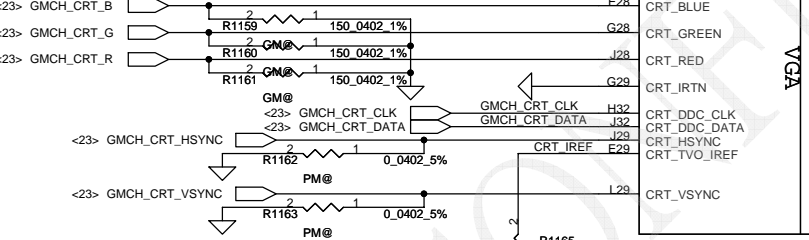
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Change to 00hm when use PM chip

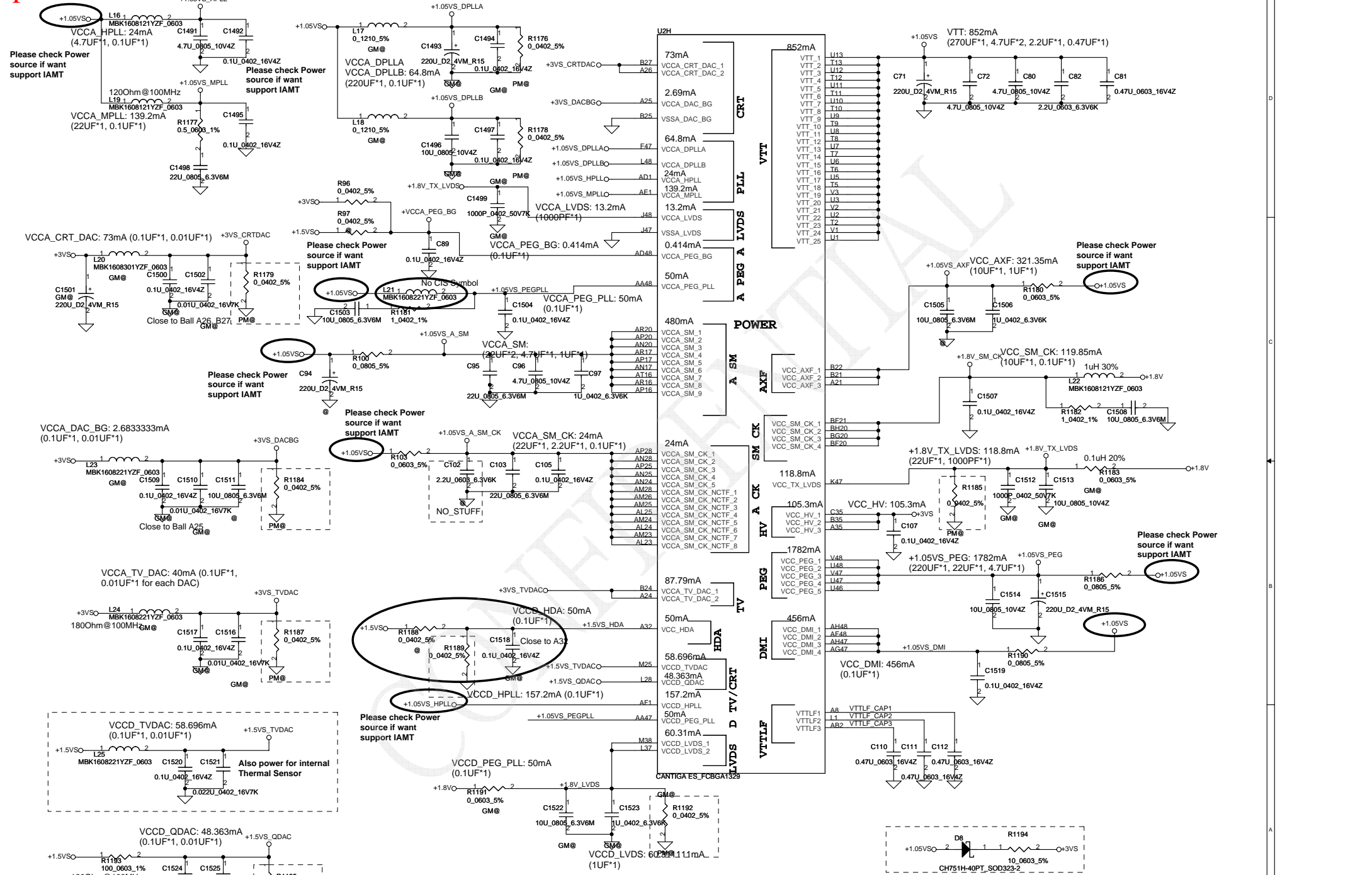


Change to 00hm when use PM chip

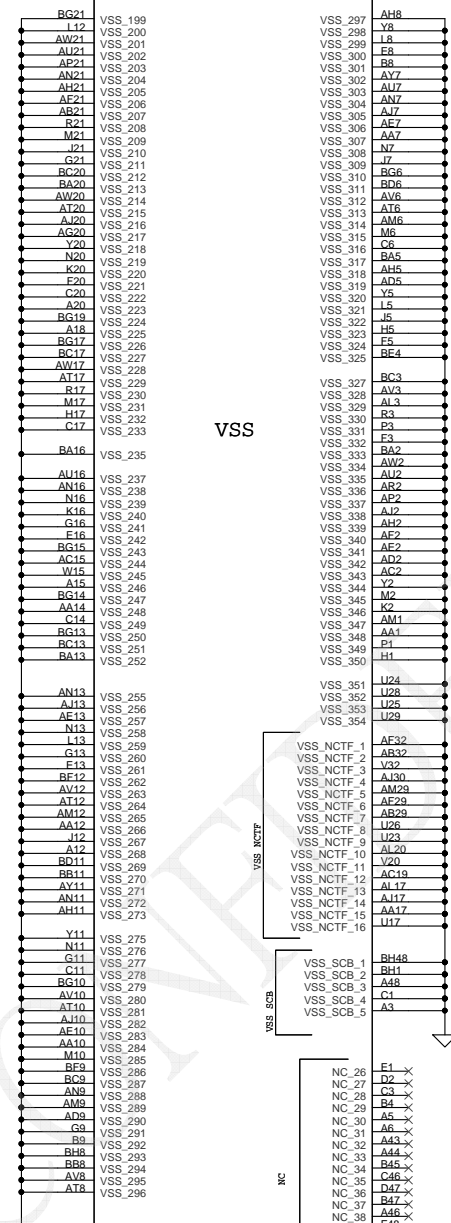
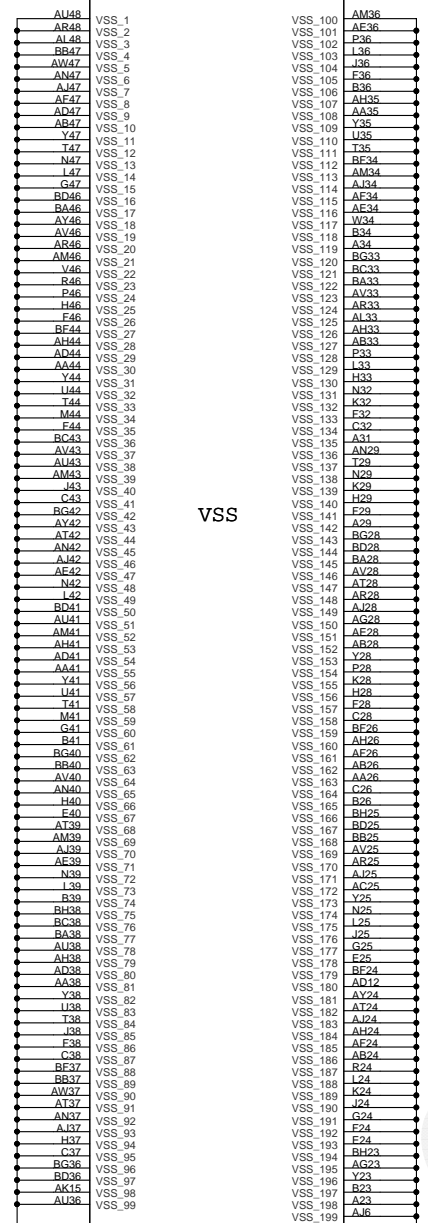


CANTIGA ES_FCBGA1329

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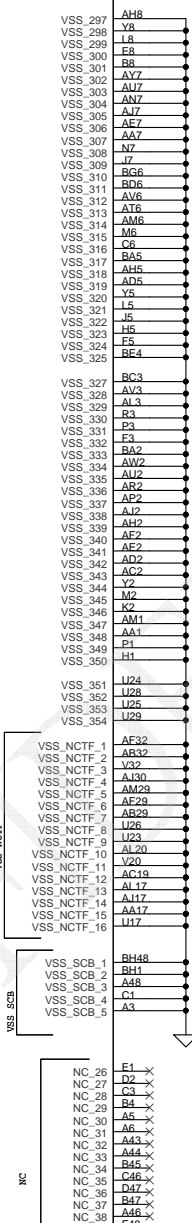


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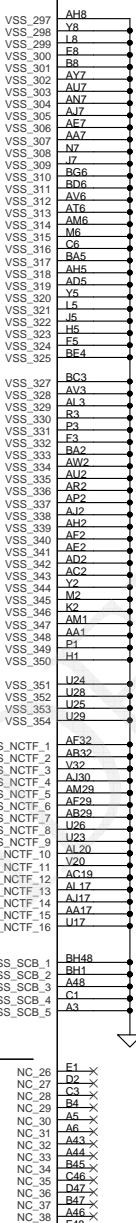


VSS

VSS



VSS



VSS

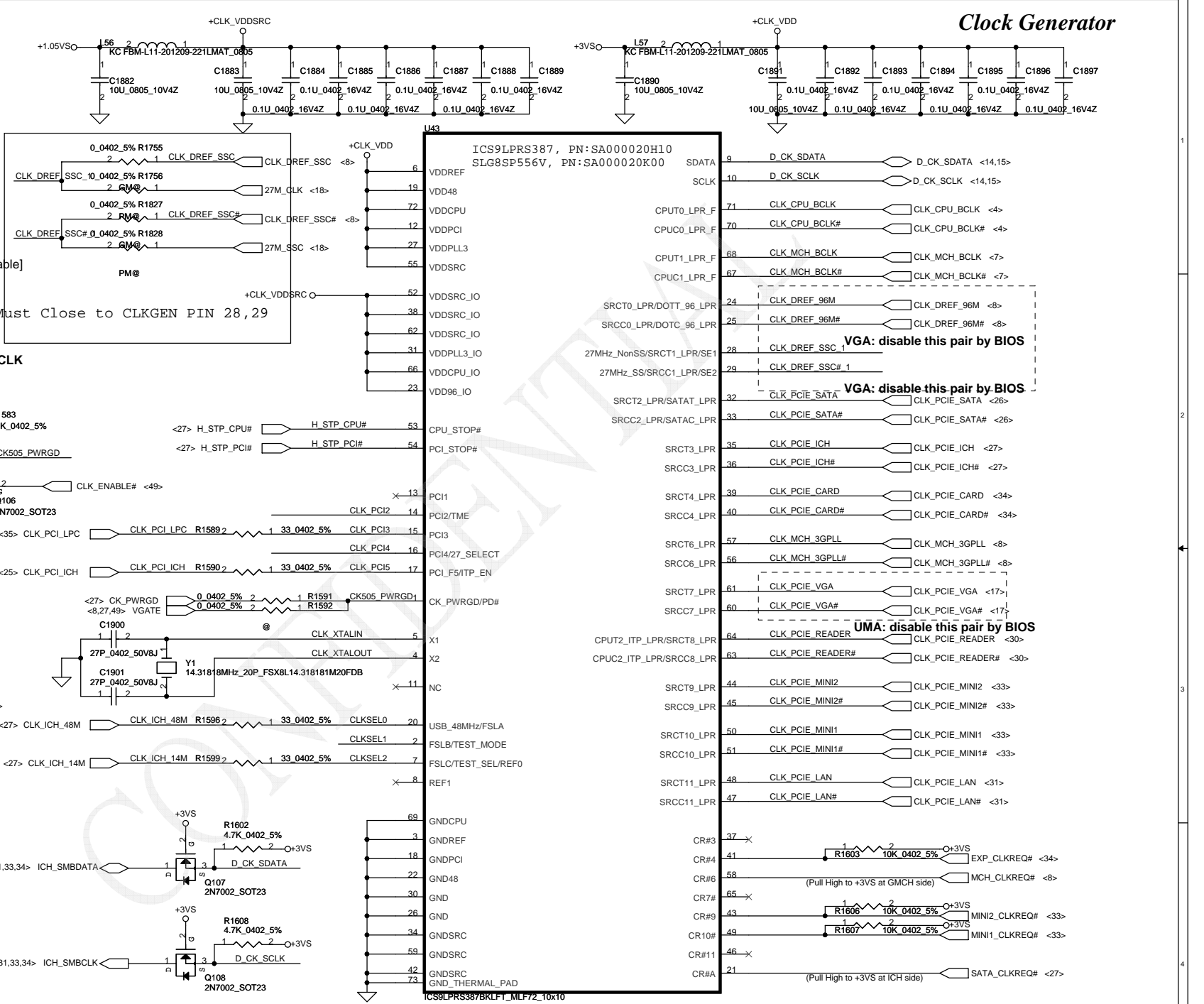
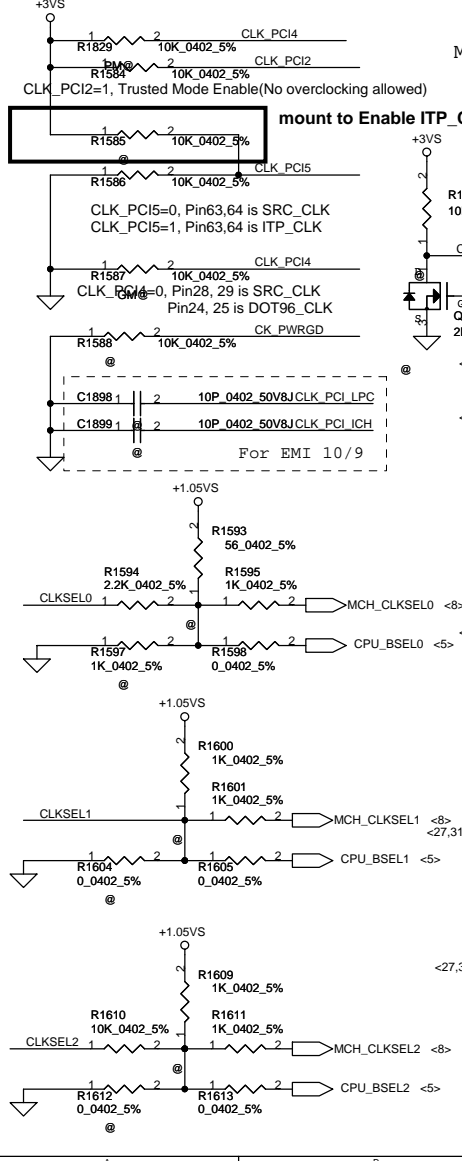
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FSLC	FSLB	FSLA	CPU	PCI
CLKSEL2	CLKSEL1	CLKSEL0	MHz	MHz
0	0	0	266	100
0	1	0	200	100
0	1	1	166	100

Table : ICS9LPRS387

CLK_REQ#	Control	Free-Run
CR#_10(WLAN)	PCIEX10	PCIEX0
CR#_6(MCH)	PCIEX6	PCIEX1
CR#_4(NEW CARD)	PCIEX4	
CR#_9(MINI CARDII)	PCIEX9	

SRC7(VGA_CLK): Discrete VGA[Enable] UMA[Disable]



Clock Generator

VGA: disable this pair by BIOS

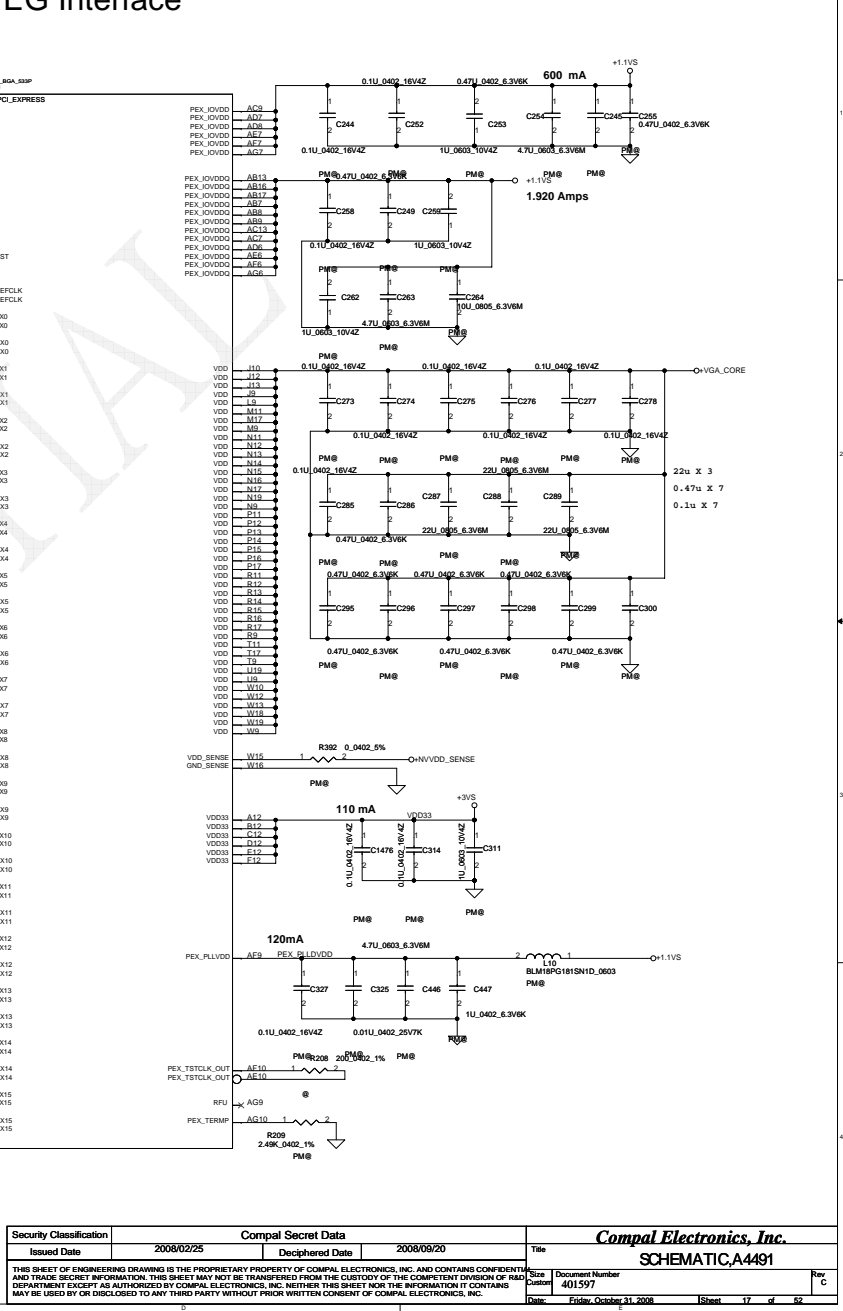
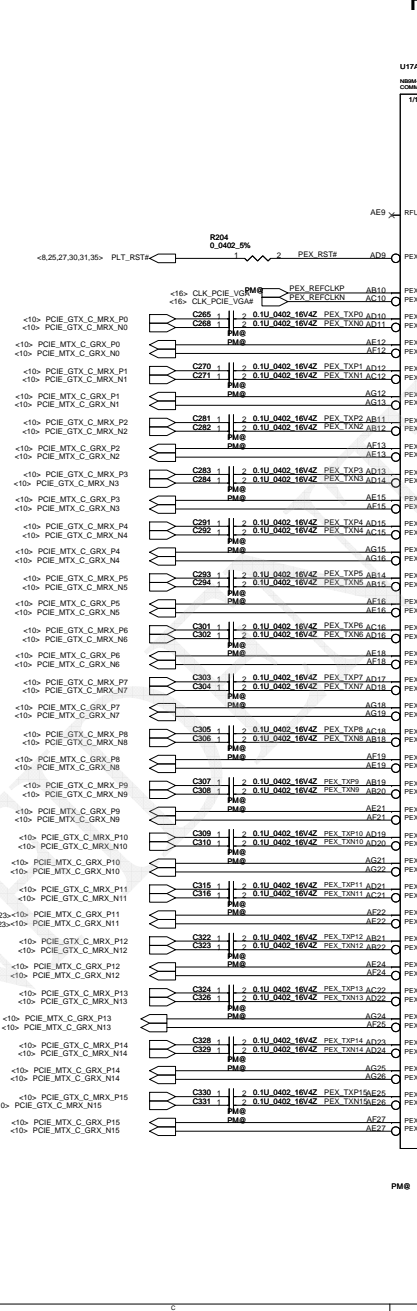
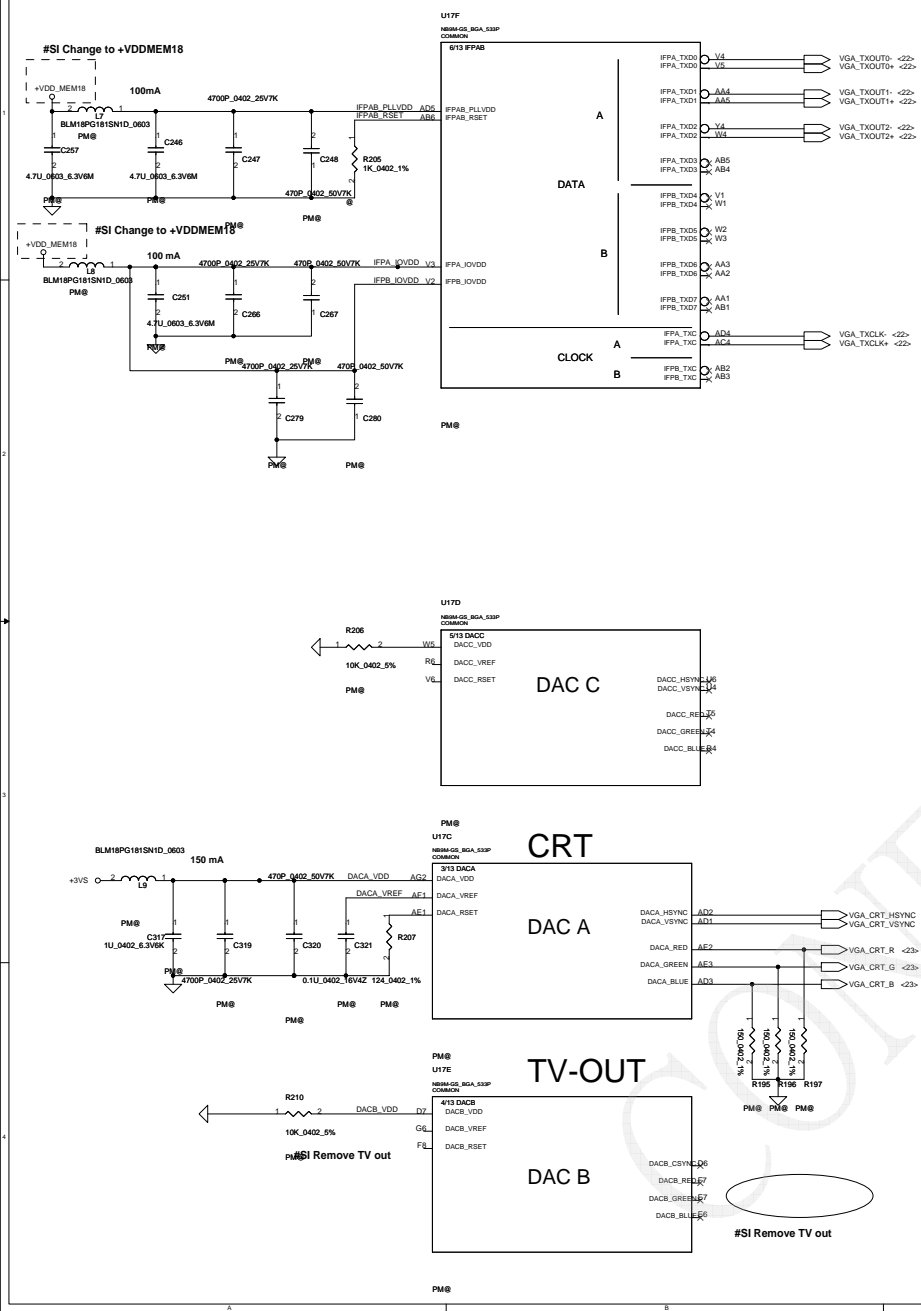
VGA: disable this pair by BIOS

UMA: disable this pair by BIOS

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LVDS & DAC Interface

PEG Interface

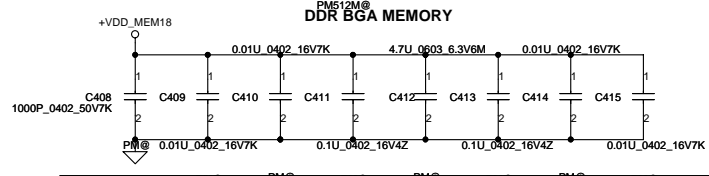
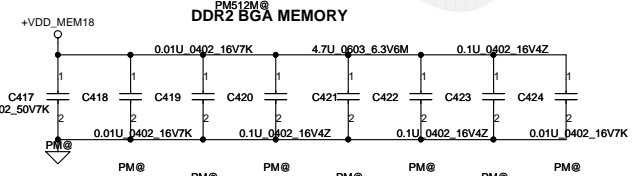
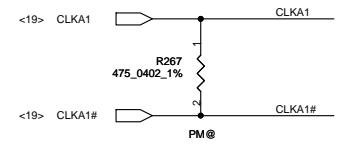
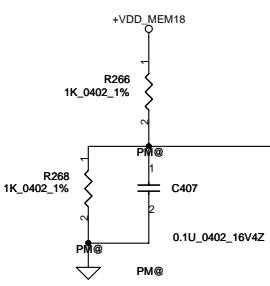
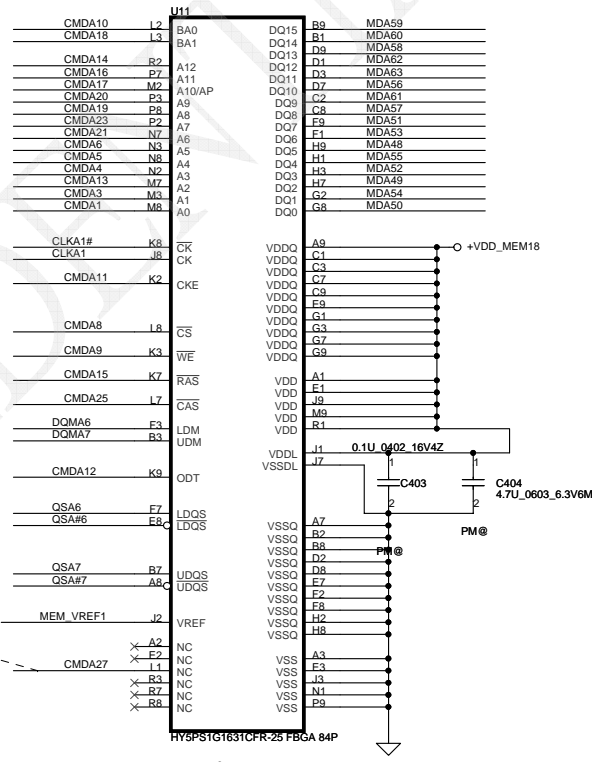
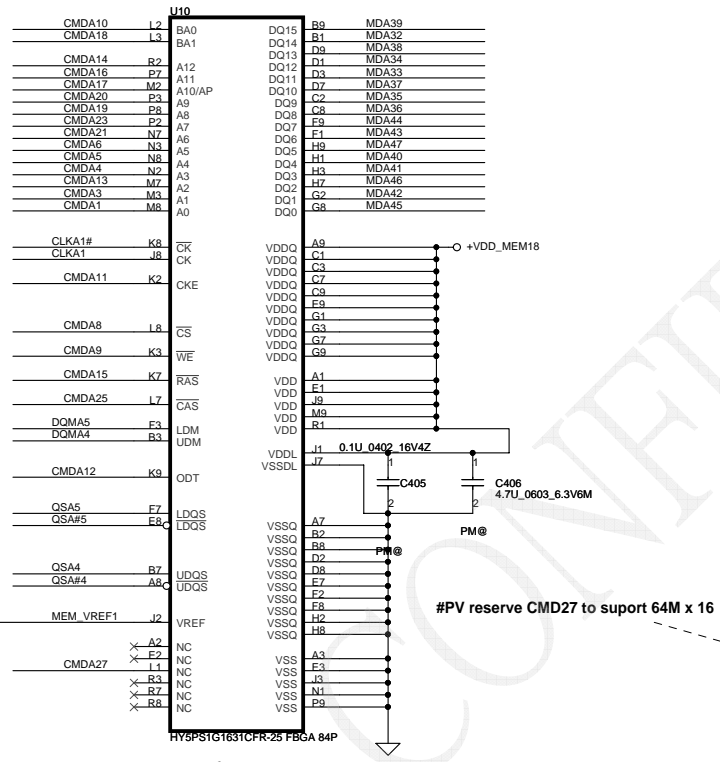
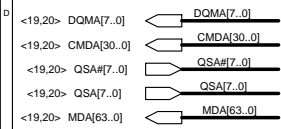


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				Sheet	17 of 92

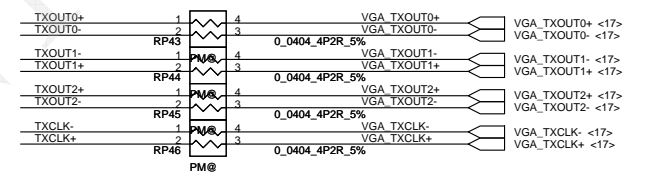
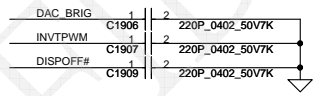
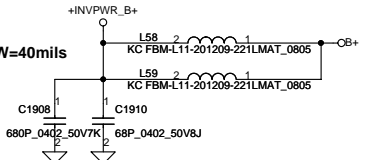
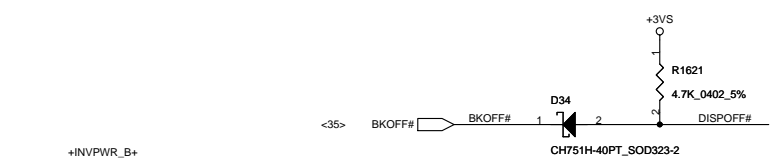
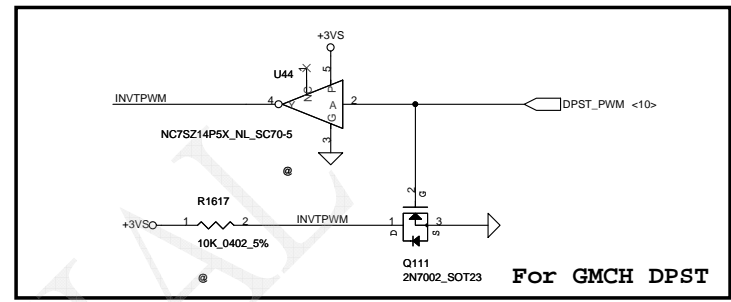
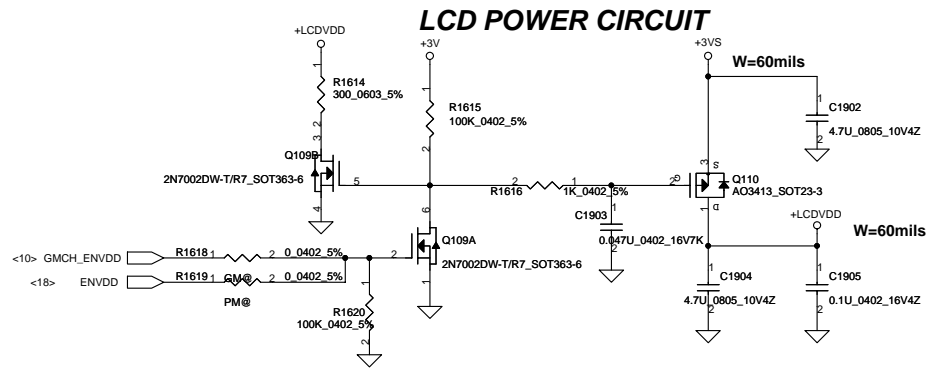
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64Mx16 DDR2 400MHz*4==>512MB

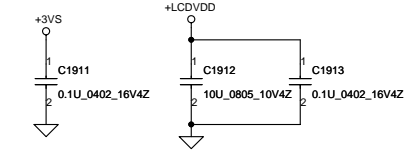
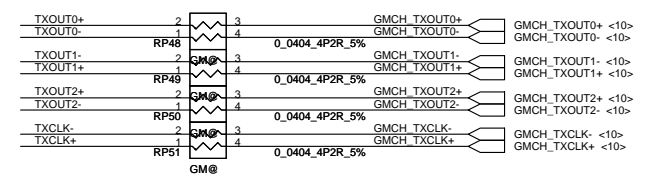
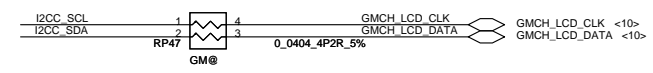
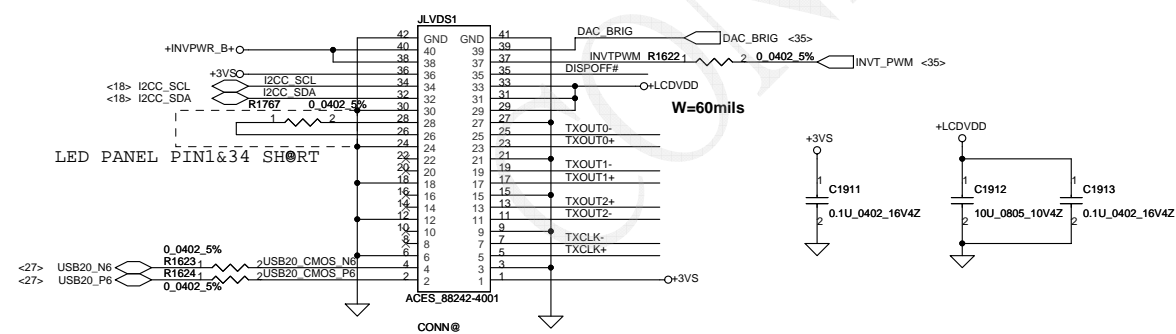
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CMD1	A0	A0
CMD2	A2	
CMD3	A1	A1
CMD4		A3
CMD5		A4
CMD6		A5
CMD7		
CMD8	CS#	CS#
CMD9	WE#	WE#
CMD10	BA0	BA0
CMD11	CKE	CKE
CMD12	ODT	ODT
CMD13		
CMD14	A12	A12
CMD15	RAS#	RAS#
CMD16	A11	A11
CMD17	A10	A10
CMD18	BA1	BA1
CMD19	A8	A8
CMD20	A9	A9
CMD21	A6	A6
CMD22	A5	
CMD23	A7	A7
CMD24	A4	
CMD25	CAS#	CAS#
CMD26	A13	A13
CMD27	BA2	BA2
CMD28		
CMD29		
CMD30		



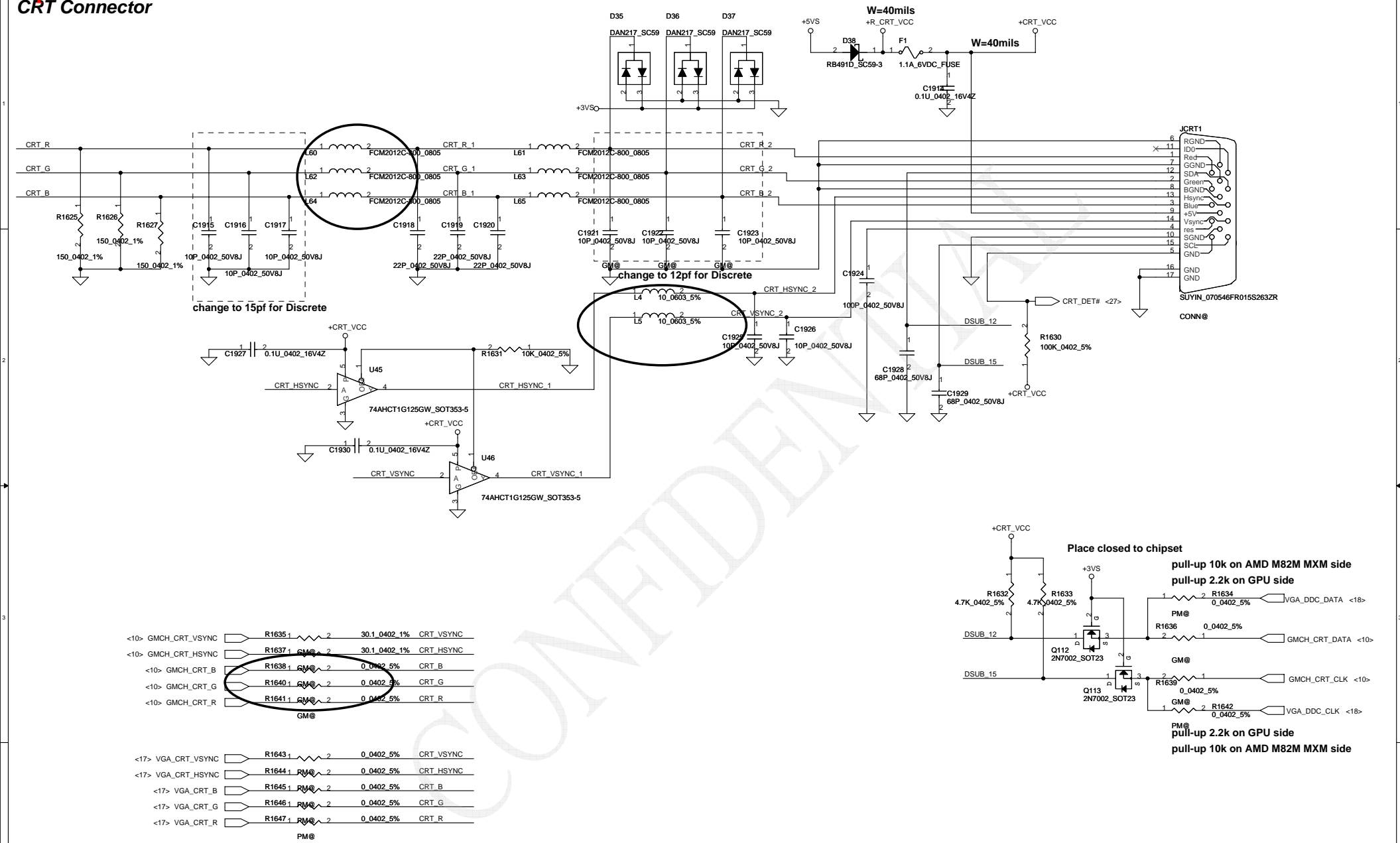
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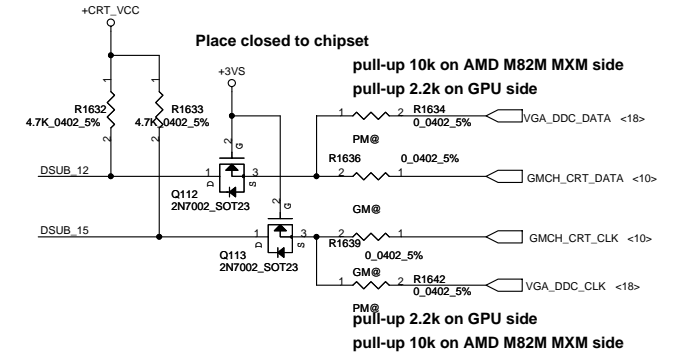
LCD/PANEL BD. Conn.



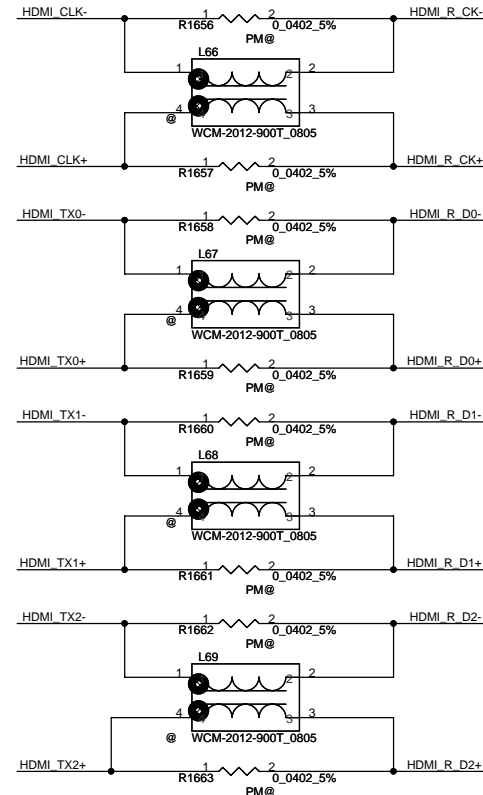
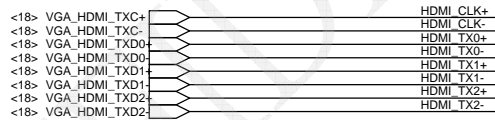
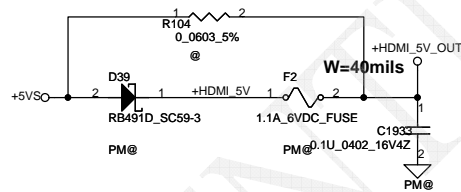
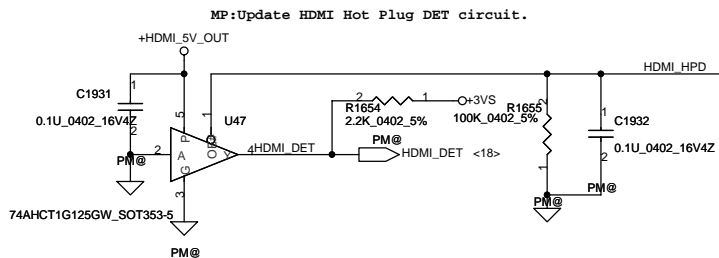
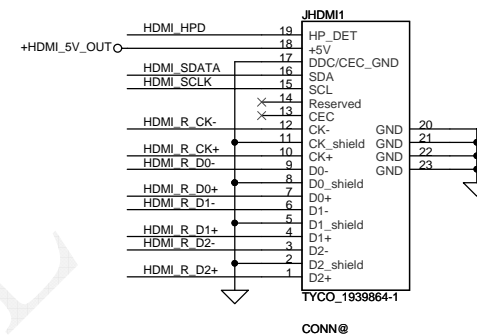
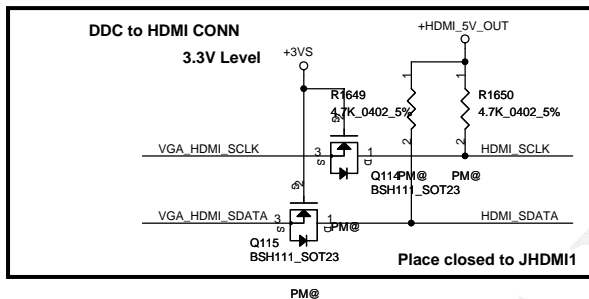
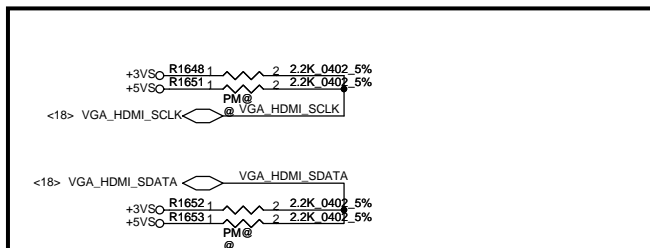
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Issued Date	2008/03/28	Deciphered Date	2008/09/20	SCHEMATIC,A4491	
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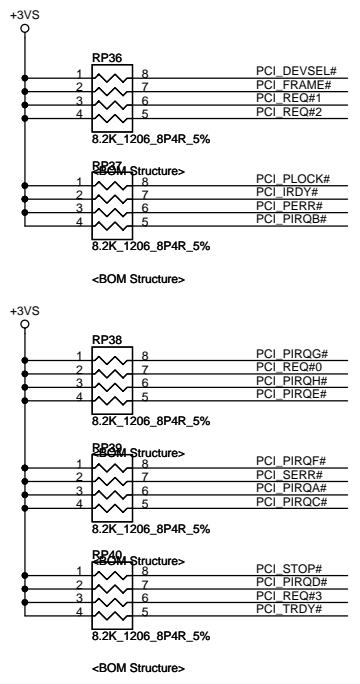
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 - <10> GMCH_CRT_B R1638 1 GM@ 2 0_0402_5% CRT_B
 - <10> GMCH_CRT_G R1640 1 GM@ 2 0_0402_5% CRT_G
 - <10> GMCH_CRT_R R1641 1 GM@ 2 0_0402_5% CRT_R
- GM@
- <17> VGA_CRT_VSYNC R1643 1 2 0_0402_5% CRT_VSYNC
 - <17> VGA_CRT_HSYNC R1644 1 RM@ 2 0_0402_5% CRT_HSYNC
 - <17> VGA_CRT_B R1645 1 RM@ 2 0_0402_5% CRT_B
 - <17> VGA_CRT_G R1646 1 RM@ 2 0_0402_5% CRT_G
 - <17> VGA_CRT_R R1647 1 RM@ 2 0_0402_5% CRT_R
- PM@



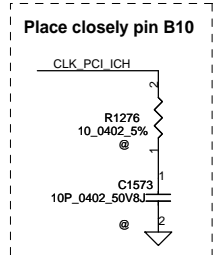
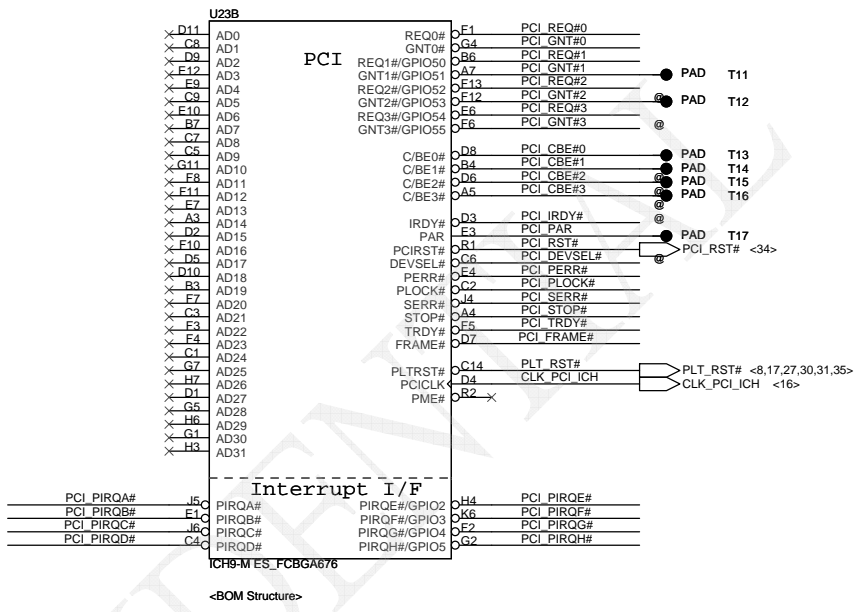
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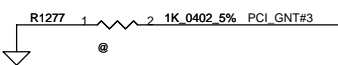
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DMI for ESI-compatible operation
PCI_GNT#1 Low= DMI for ESI-compatible operation
 High= Default* (Internal pull-up)

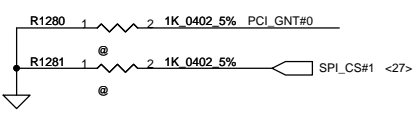


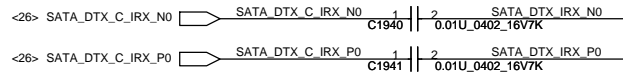
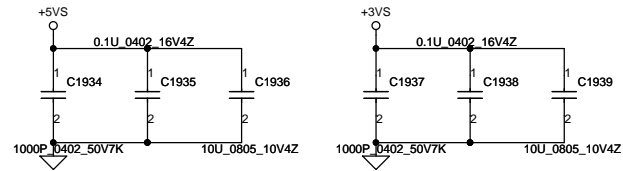
A16 Swap Override Strap
PCI_GNT#3 Low= A16 swap override Enable
 High= Default*



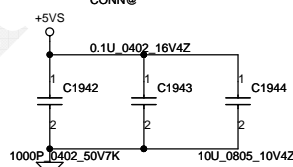
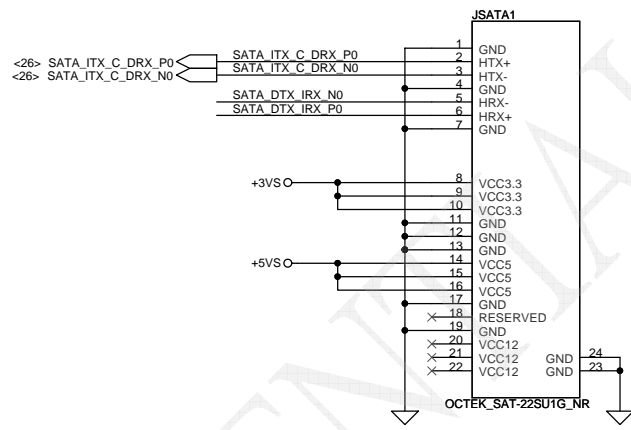
Boot BIOS Strap

PCI_GNT#0	SPI_CS#1	Boot BIOS Location
0	1	SPI
1	0	PCI
1	1	LPC*

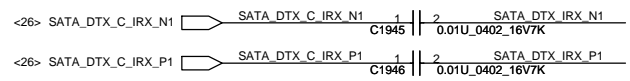
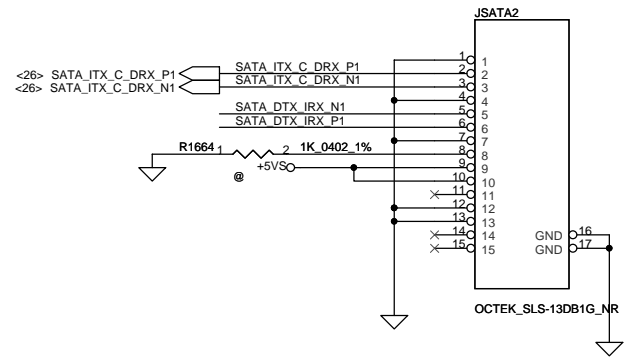




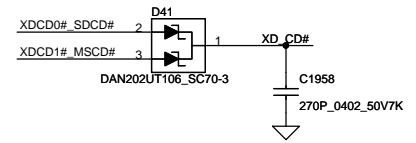
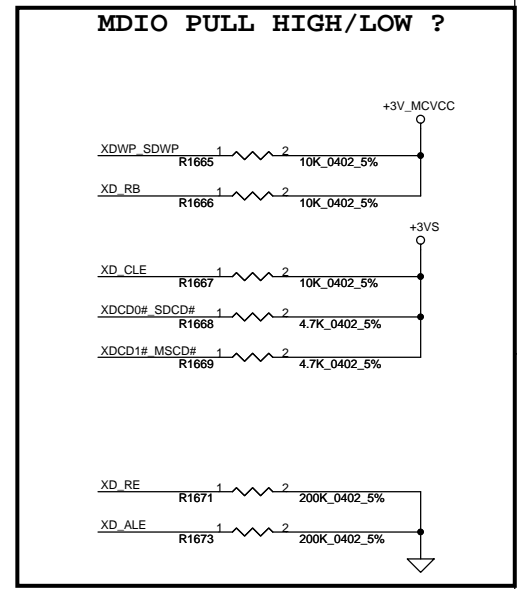
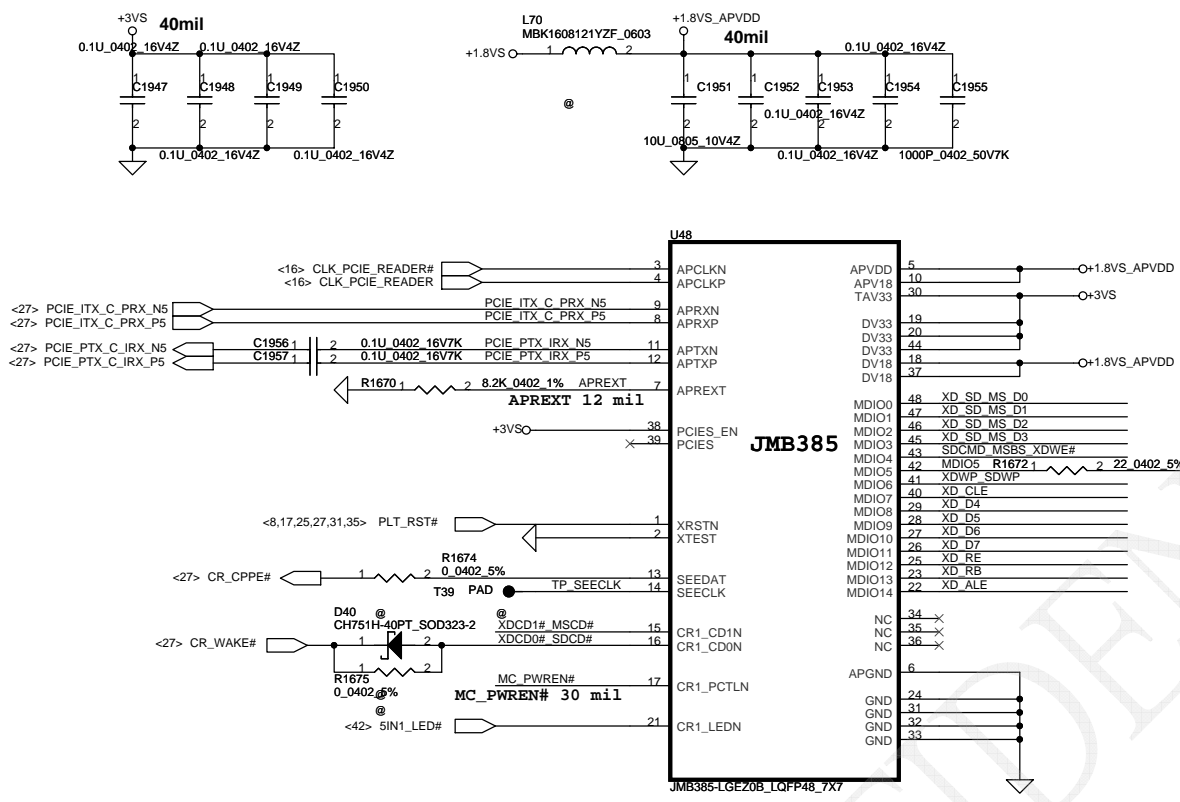
SATA HDD Conn.



SATA ODD Conn.

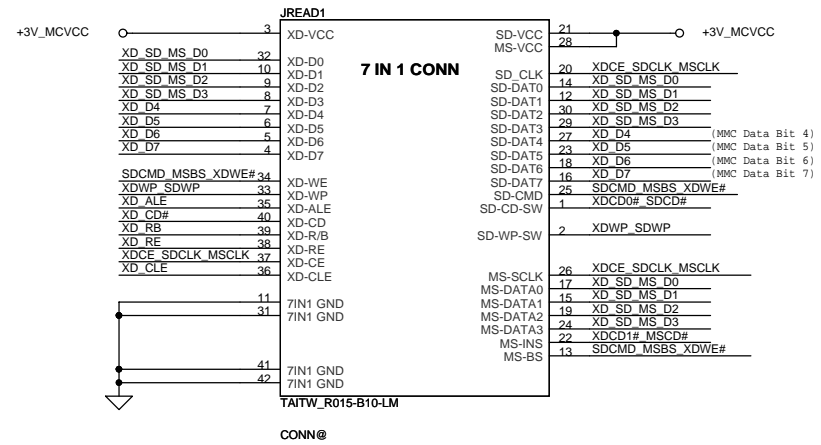
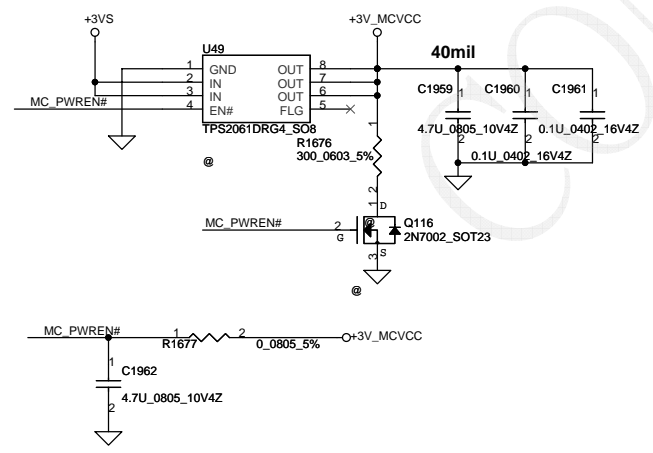


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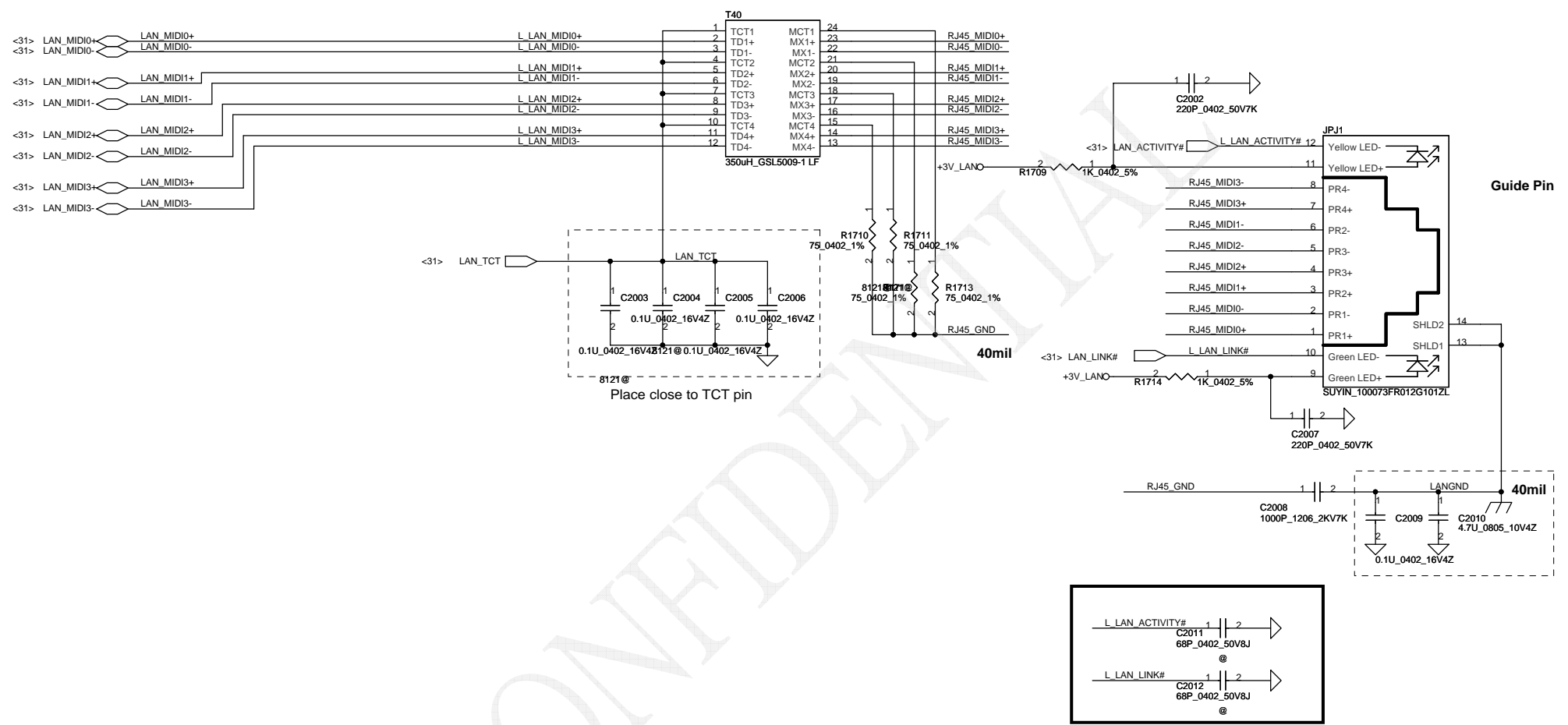
4 IN 1 Socket Push Type(New)

Memory Card Power Switch



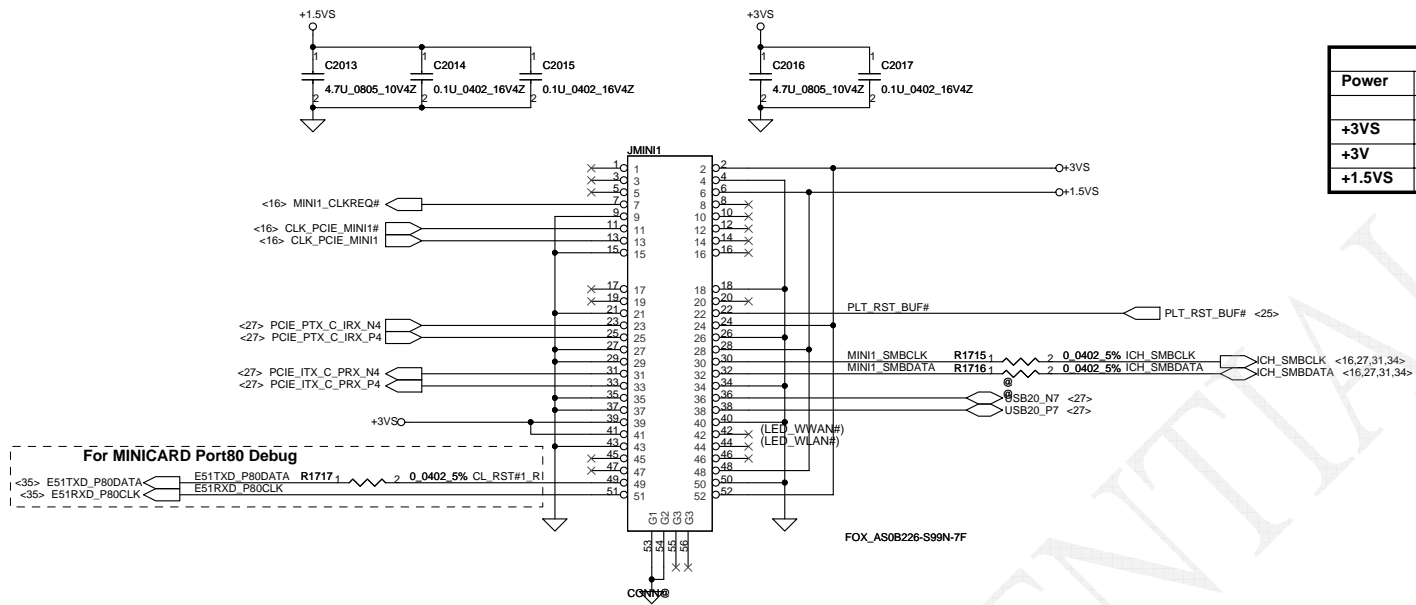
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LAN AR8121/8112



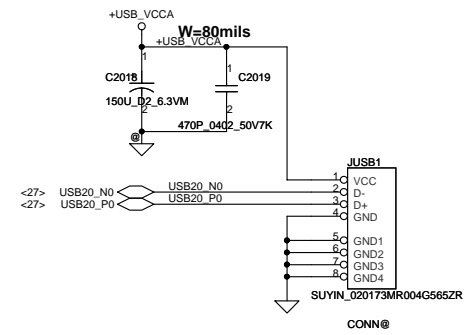
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AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				SCHEMATIC,A4491	
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For Robson2

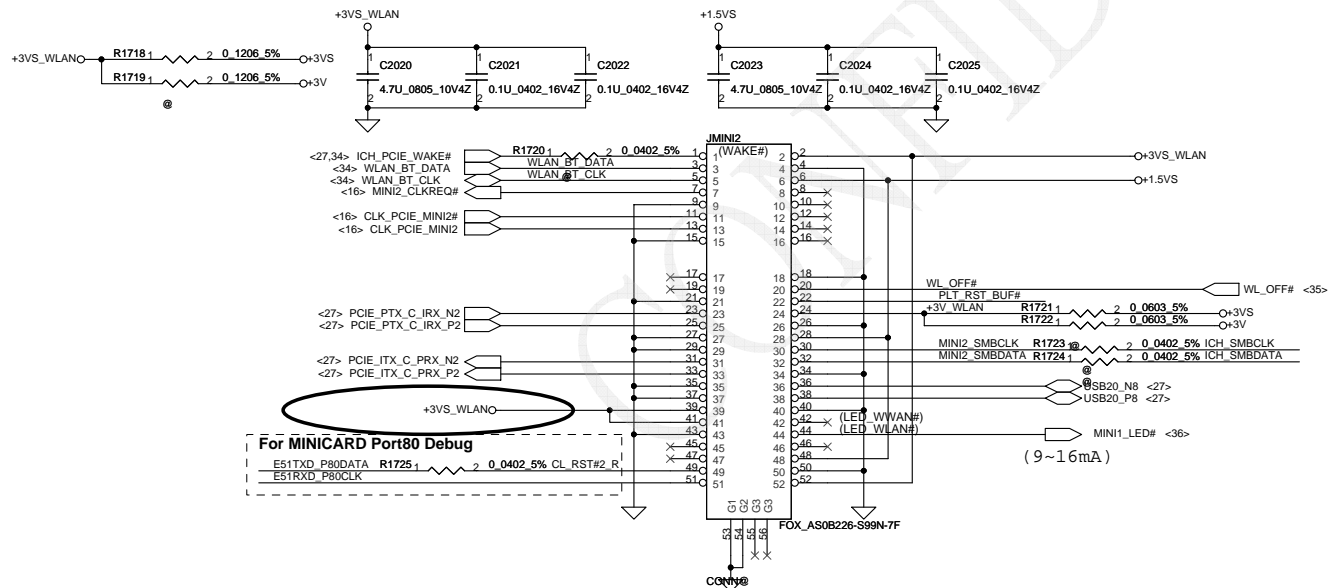


Mini Card Power Rating			
Power	Primary Power (mA)		Auxiliary Power (mA)
	Peak	Normal	Normal
+3VS	1000	750	
+3V	330	250	250 (wake enable)
+1.5VS	500	375	5 (Not wake enable)

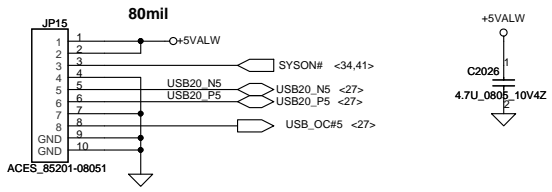
USB CONN.



For Wireless LAN

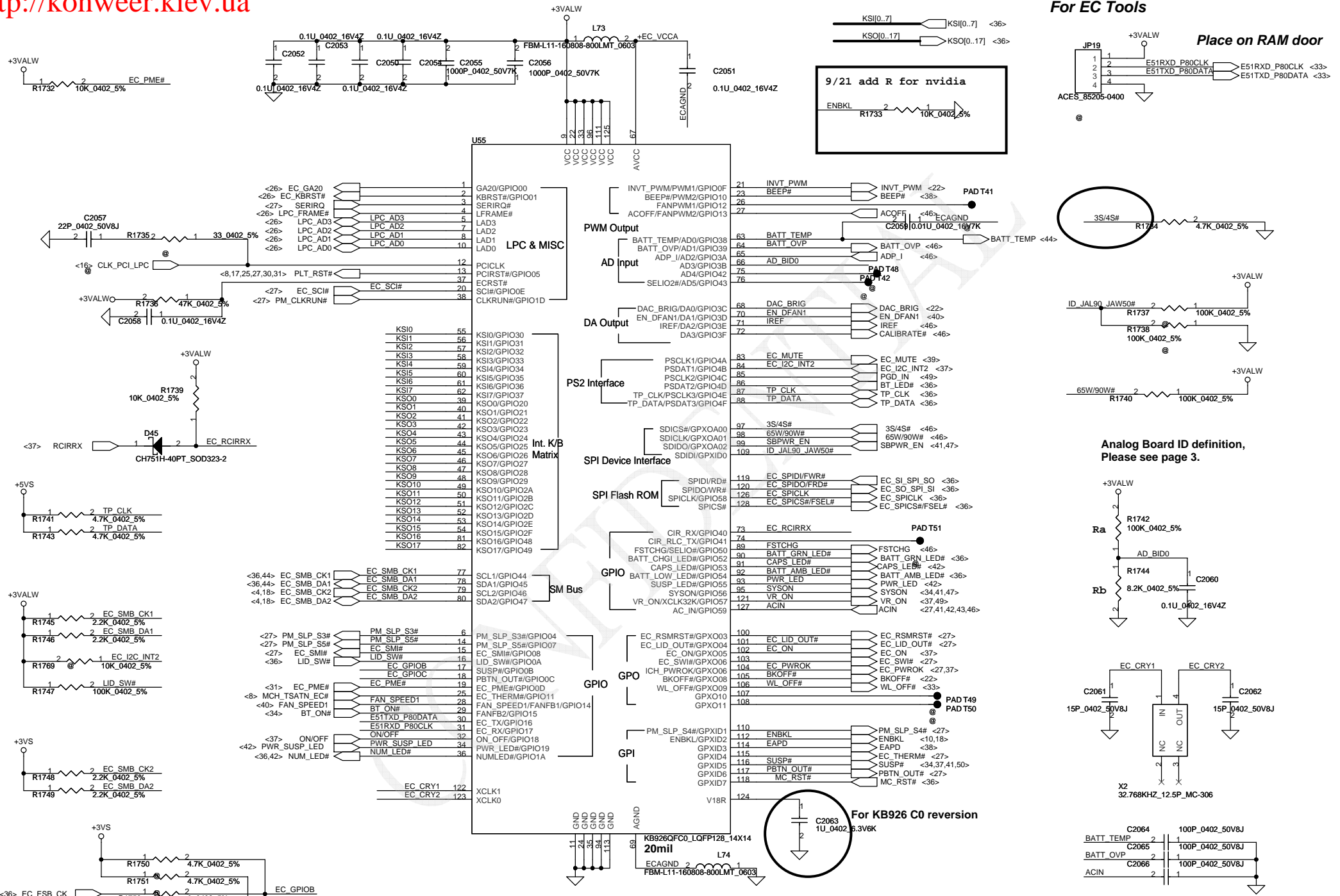


To USB/B Connector



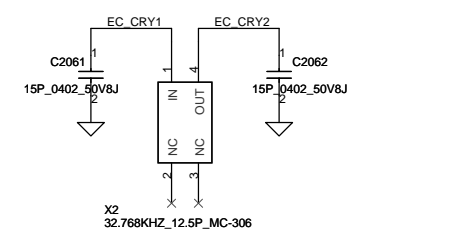
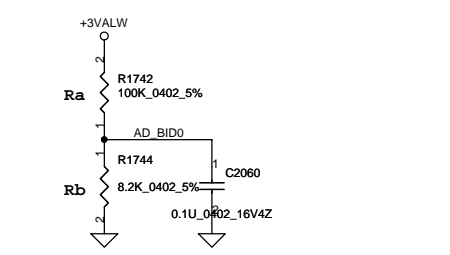
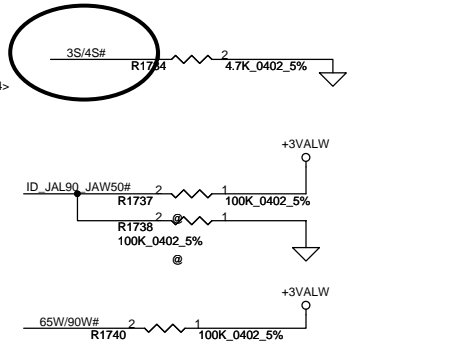
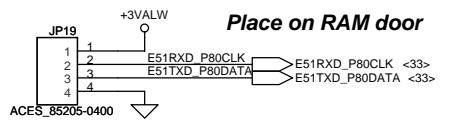
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Place on RAM door

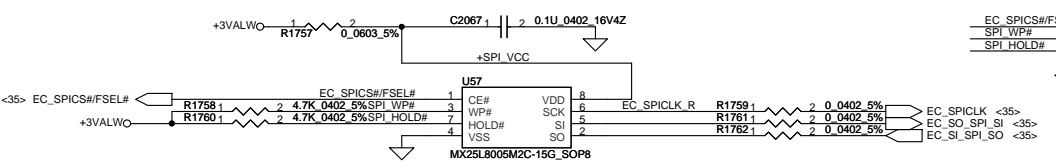


9/21 add R for nvidia

ENBKL R1733 10K_0402_5%

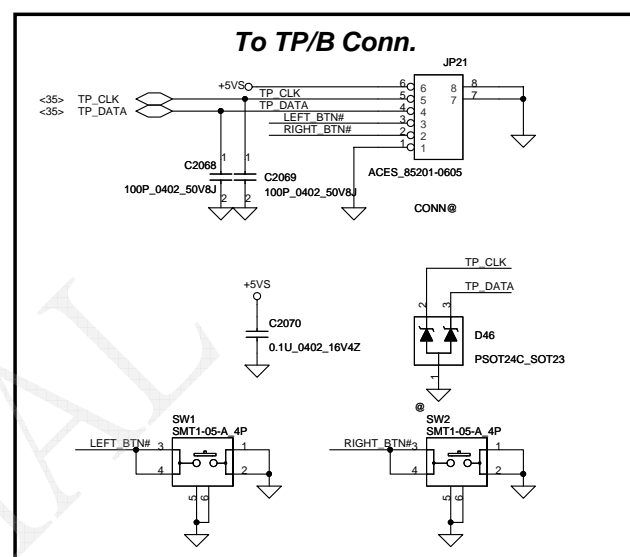


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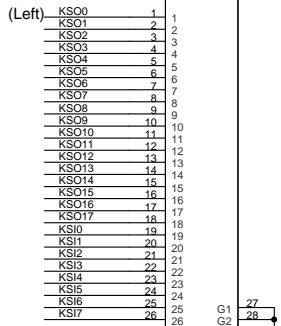
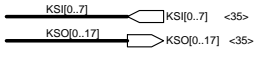


ENE suggestion SPI Frequency over 66MHz
 SST: 50MHz
 MXIC: 70MHz
 ST: 40MHz

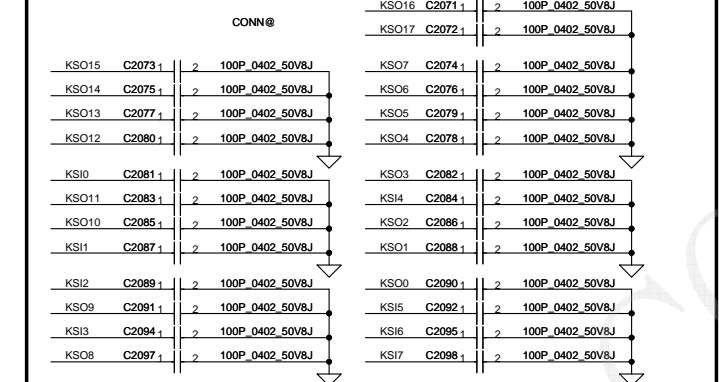
Reserved for BIOS simulator.
 Footprint S08



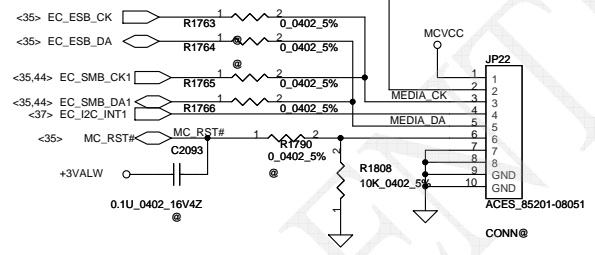
INT_KBD Conn.



(Right) ACES_85201-26051

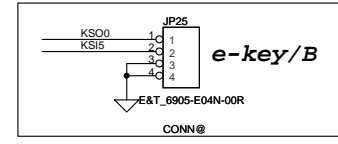


To Media/B Conn.

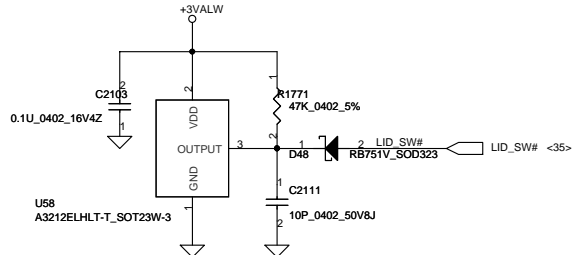


To BTN/B Conn.

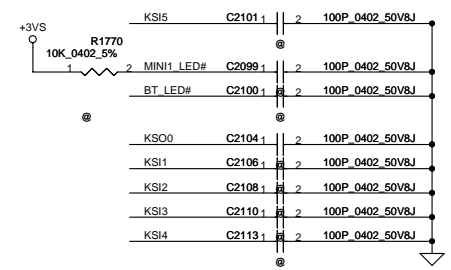
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KSI1	WL_BTN#
KSI2	BT_BTN#
KSI3	EMAIL_BTN#
KSI4	IE_BTN#
KSI5	E-KEY_BTN#



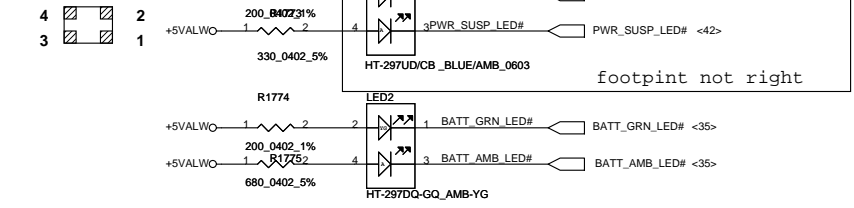
Lid Switch (Hall Effect Switch)



FOR EMI

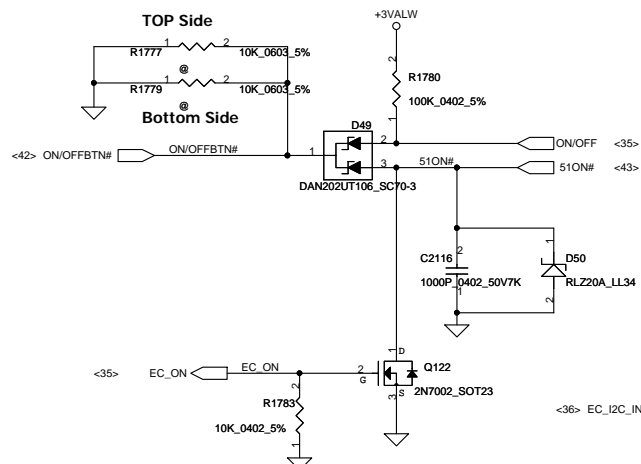


Compal Footprint

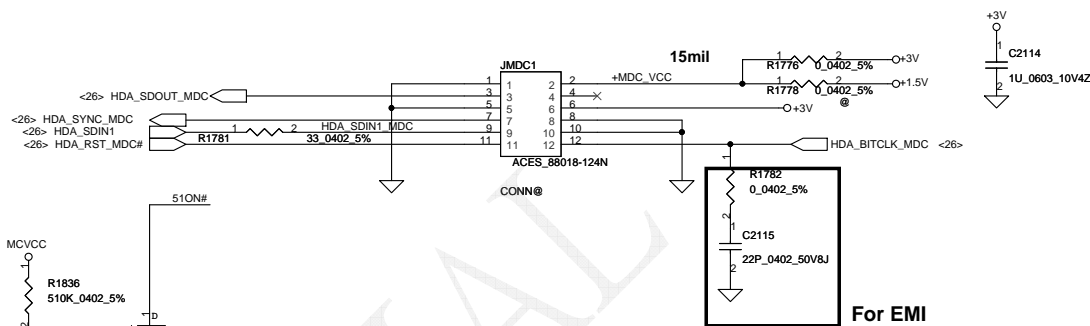


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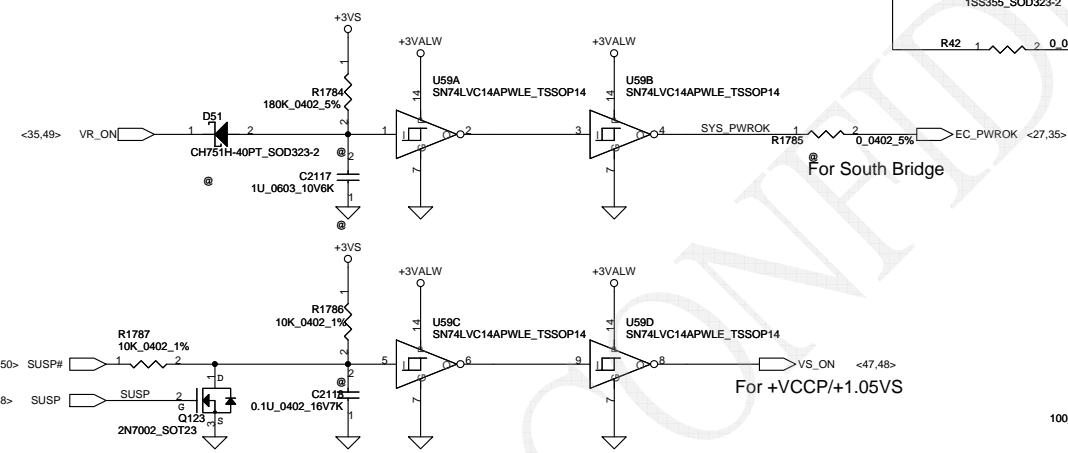
Power Button



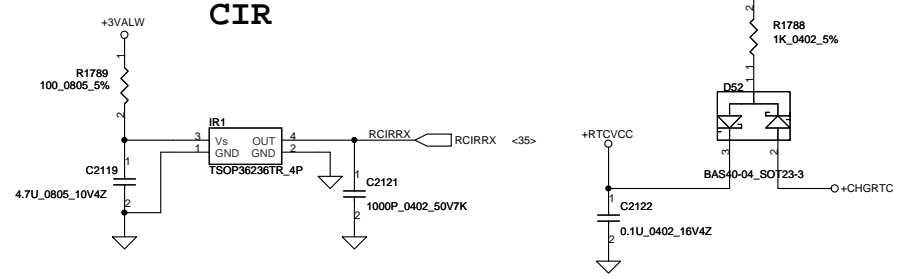
HDA MDC Conn.



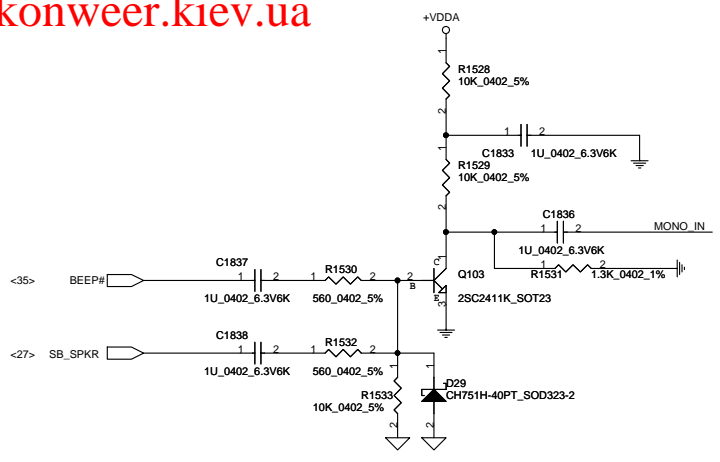
Power ON Circuit



CIR

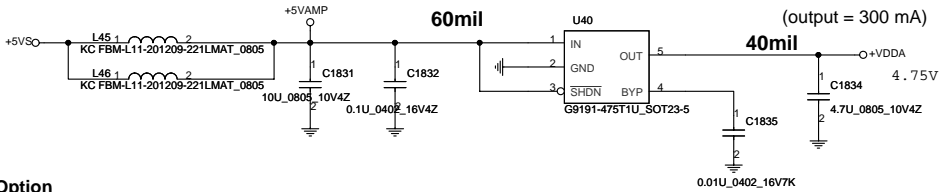


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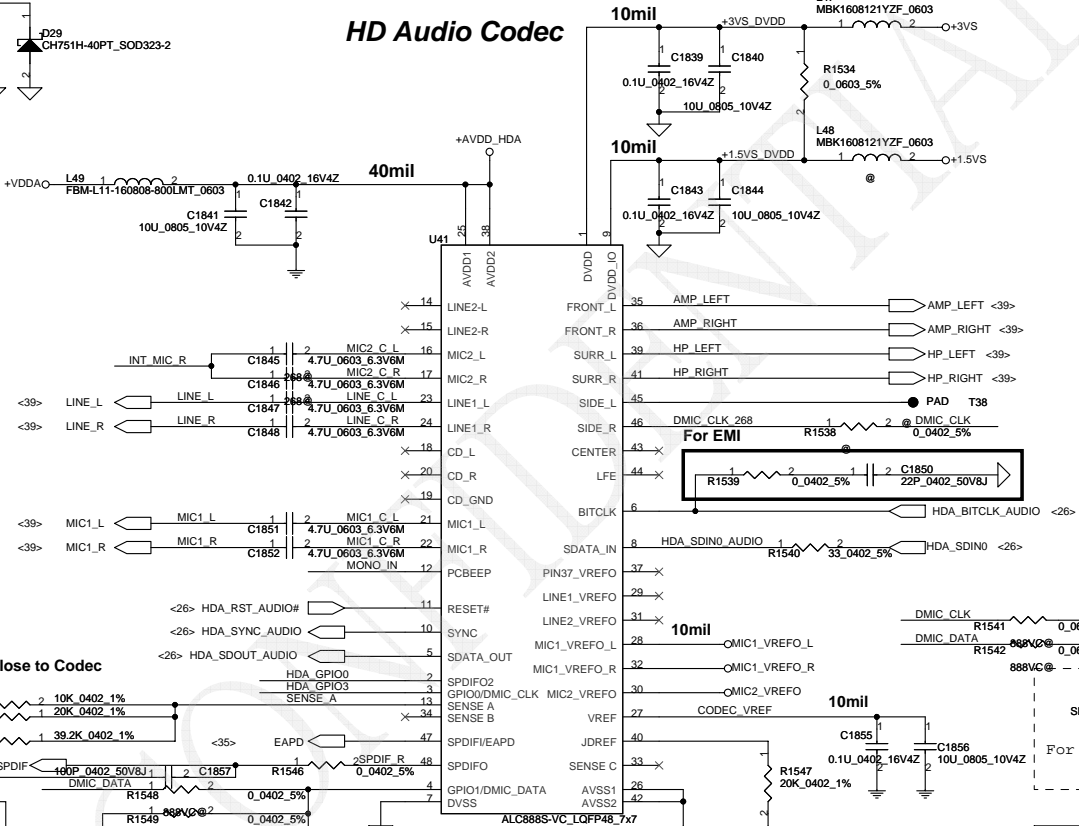


BOM Option

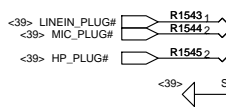
ALC268	268@
ALC888S-VB	888VB@
ALC888S-VC	888VC@



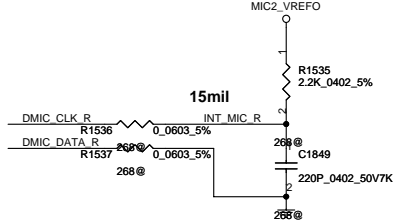
HD Audio Codec



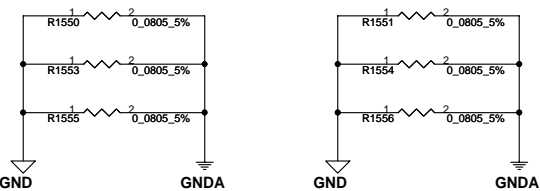
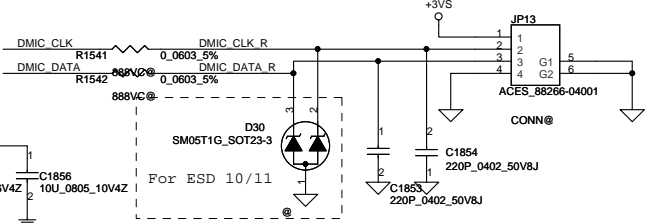
Place close to Codec



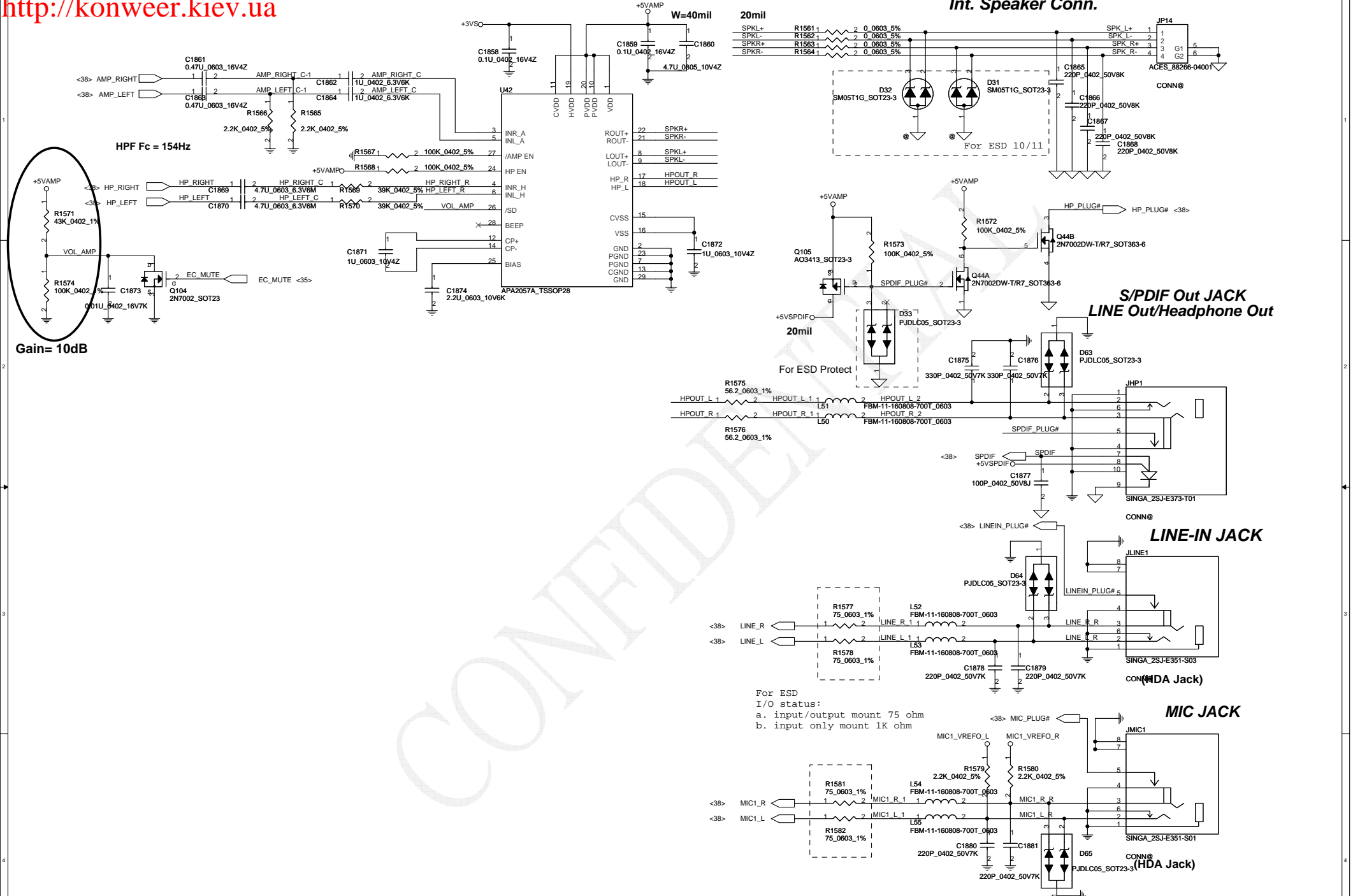
Sense Pin	Impedance	Codec Signals
SENSE A	39.2K	PORT-A (PIN 39, 41)
	20K	PORT-B (PIN 21, 22)
	10K	PORT-C (PIN 23, 24)
SENSE B	5.1K	PORT-D (PIN 35, 36)
	39.2K	PORT-E (PIN 14, 15)
	20K	PORT-F (PIN 16, 17)
	10K	PORT-G (PIN 43, 44)
	5.1K	PORT-H (PIN 45, 46)



Digital MIC

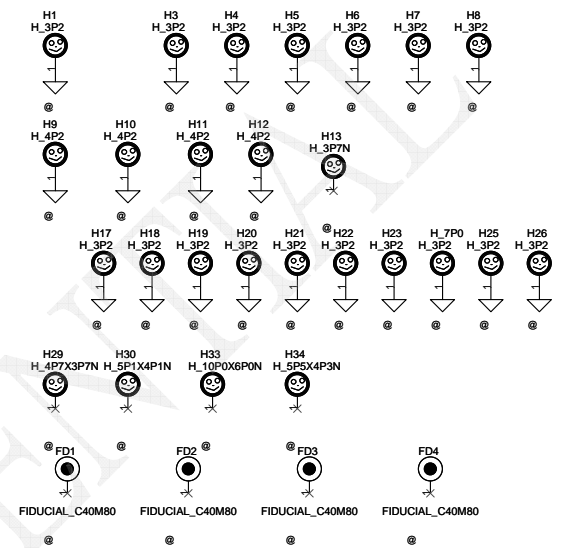
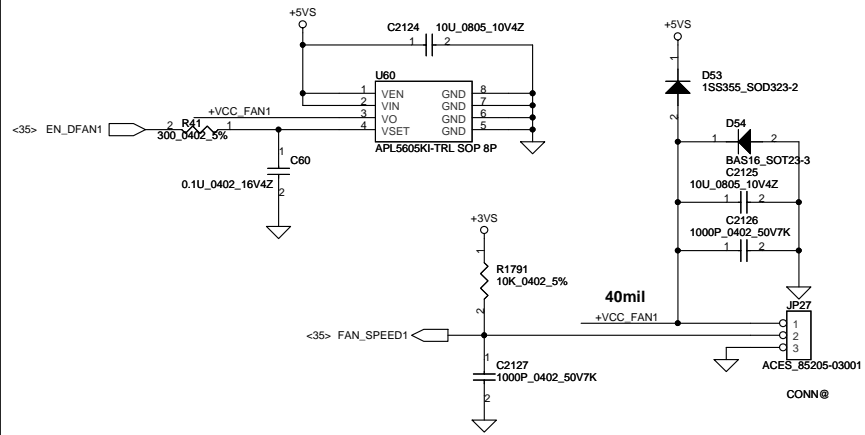


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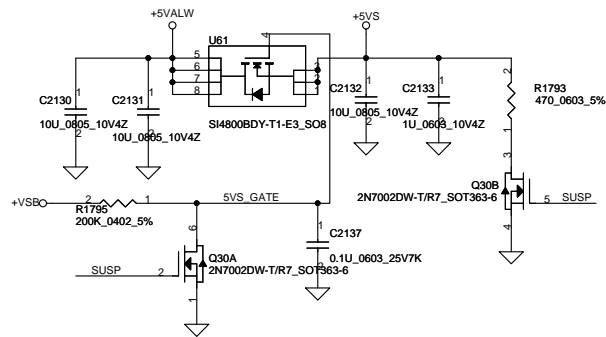
FAN1 Conn



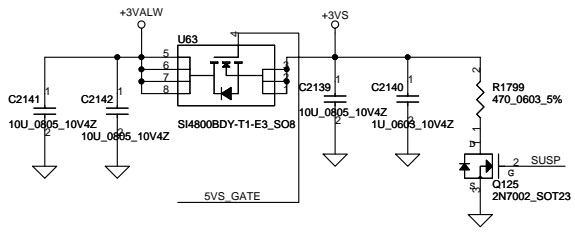
CONFIDENTIAL

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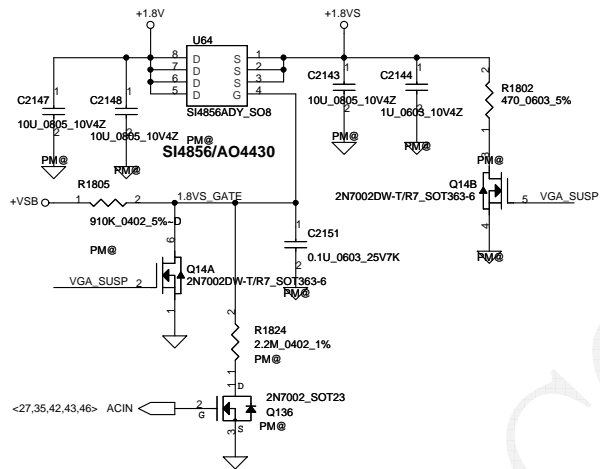
+5VALW TO +5VS



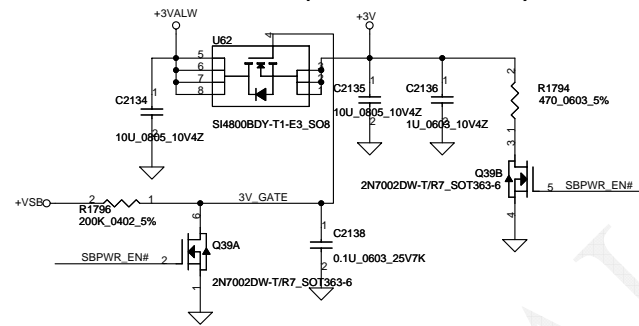
+3VALW TO +3VS



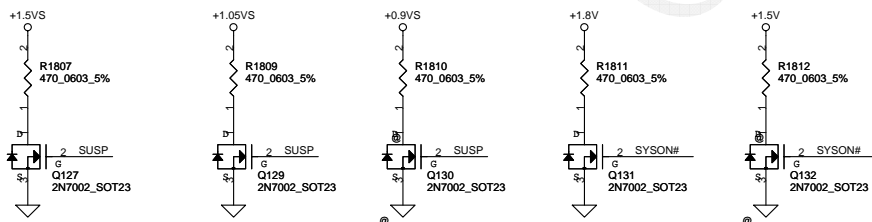
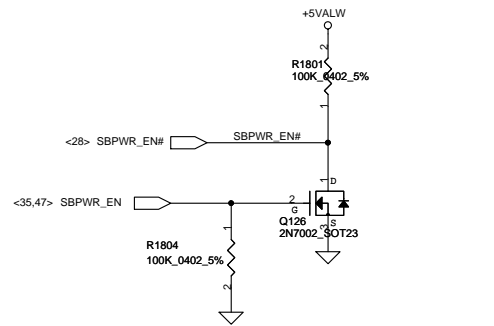
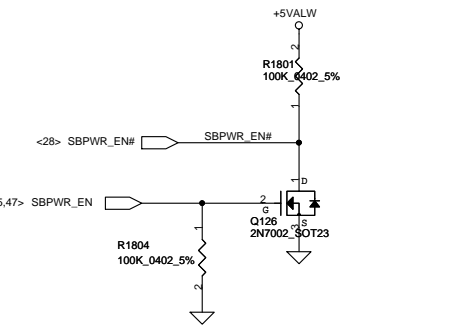
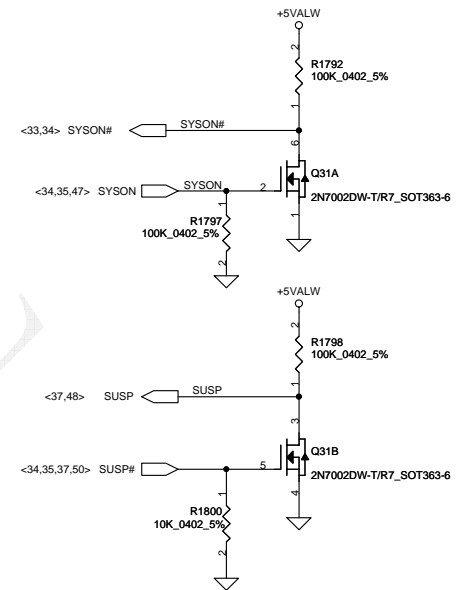
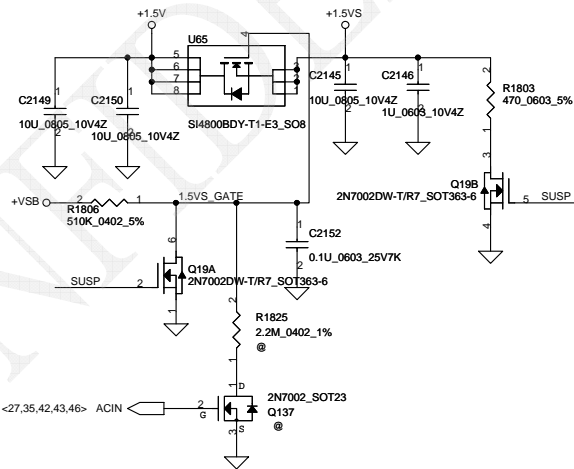
+1.8V to +1.8VS



+3VALW TO +3V_SB(ICH8M AUX Power)

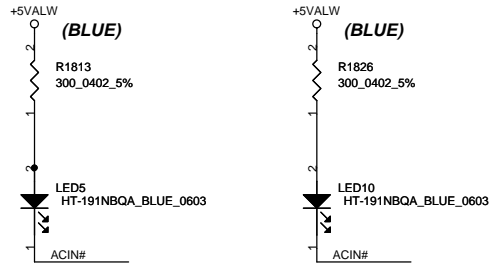


+1.5V to +1.5VS

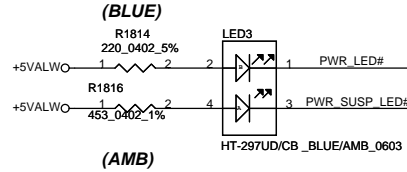


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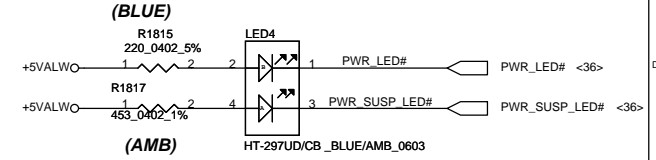
Enlightener LED



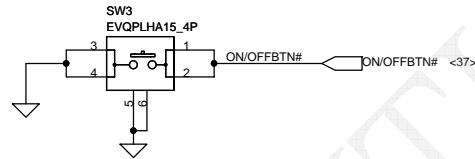
ON/OFF LED LEFT



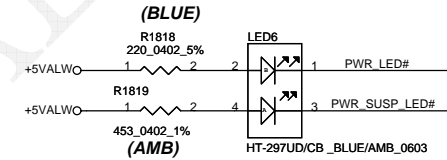
ON/OFF LED RIGHT



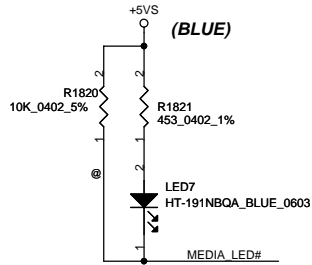
ON/OFF Button



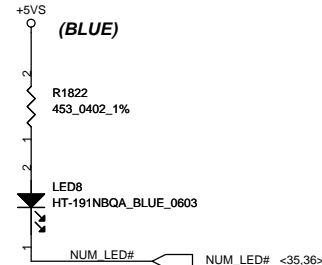
ON/OFF LED DOWN



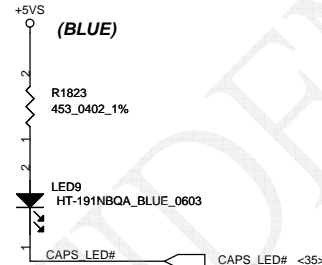
MEDIA_LED



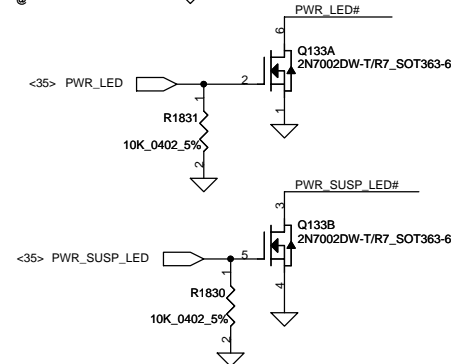
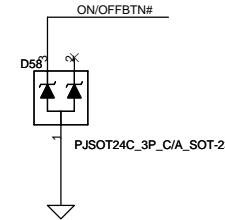
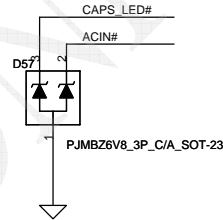
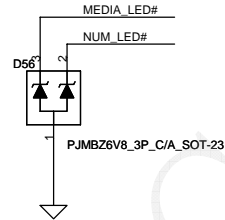
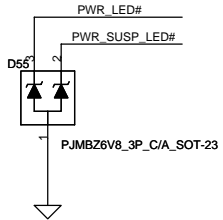
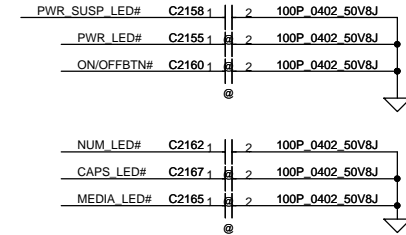
NUM_LED



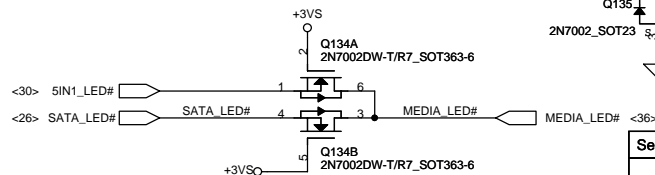
CAPS_LED



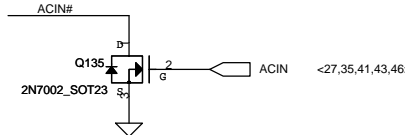
FOR EMI



**D1 D2 D3 USE PANJIT PJMBZ6V8
SCA00000I00
6.8V**

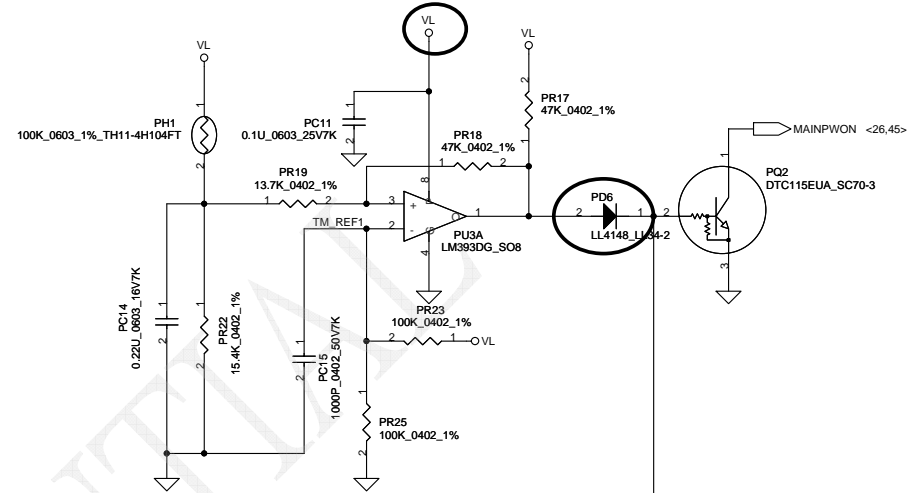
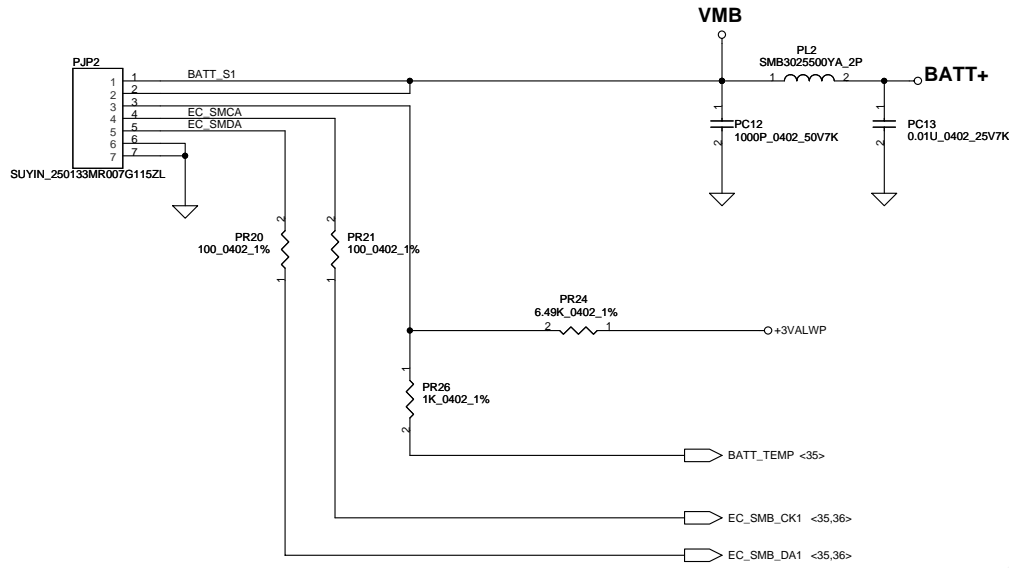


**D4 USE
PJSOT24C 3P C/A SOT-23
SCA00000E00
24V**

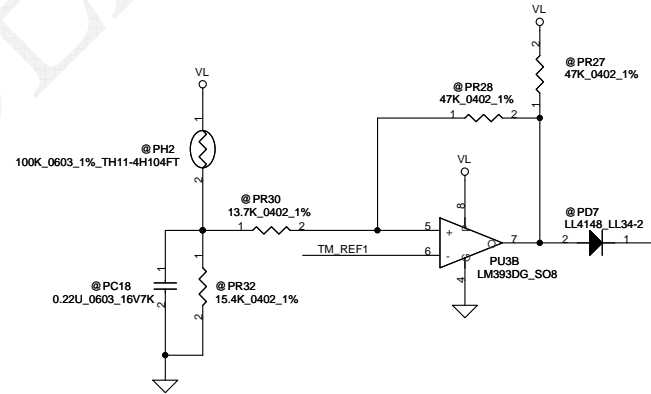
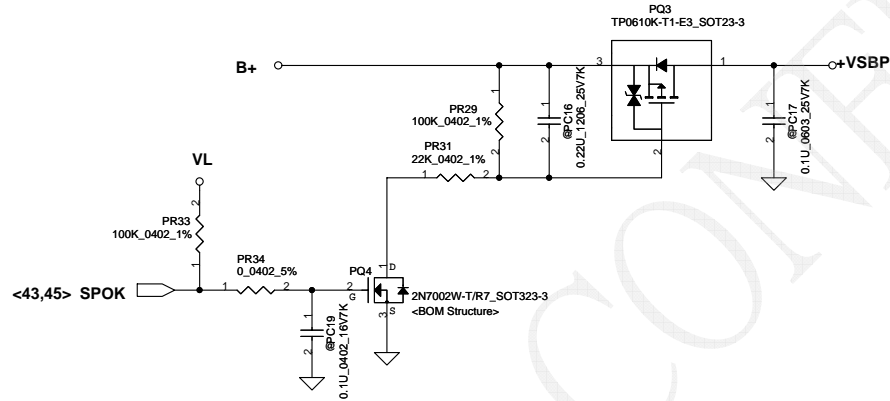


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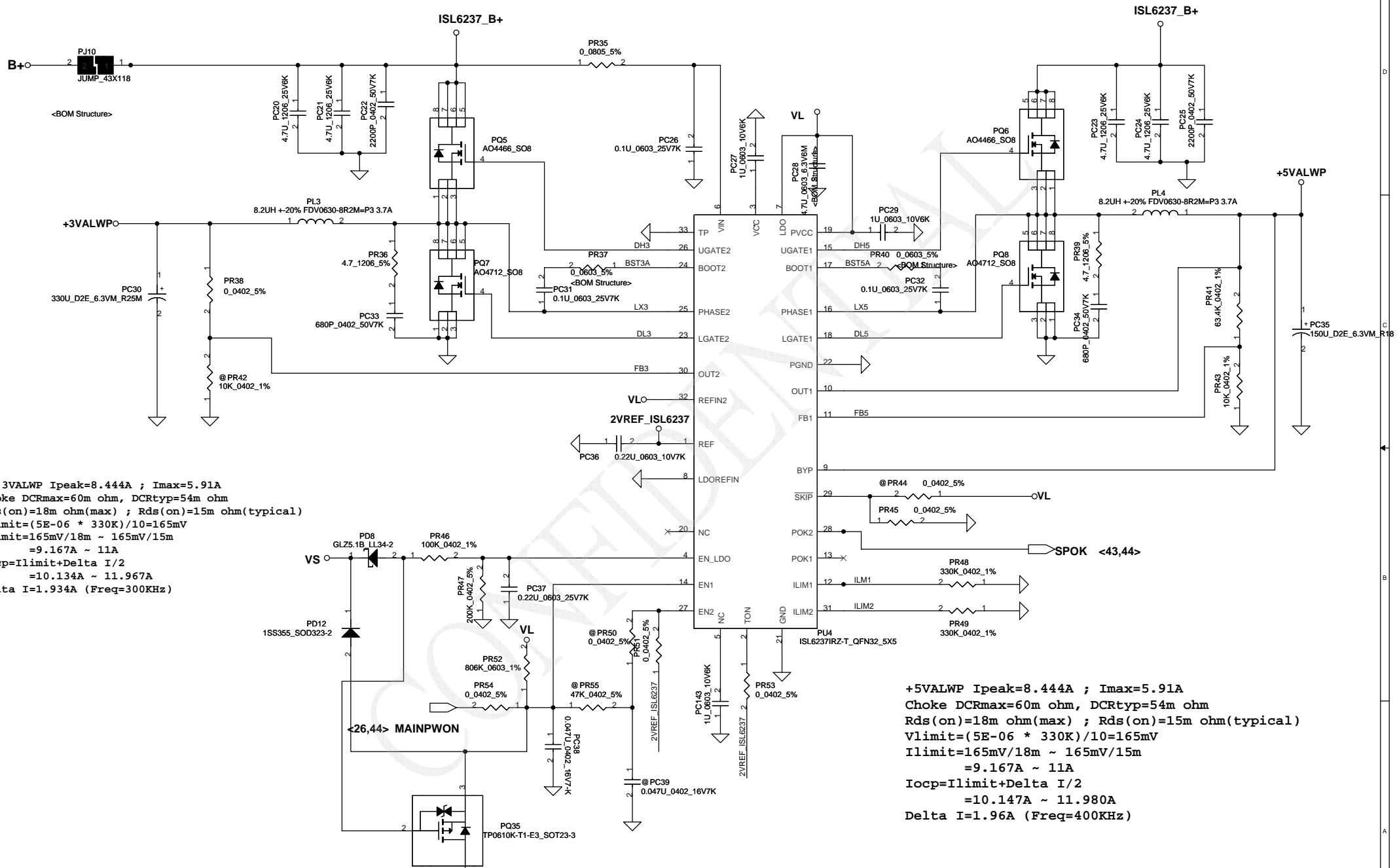
PH1 under CPU botten side :
 CPU thermal protection at 96 degree C
 Recovery at 60 degree C



PH2 near main Battery CONN :
 BAT. thermal protection at 79 degree C
 Recovery at 47 degree C



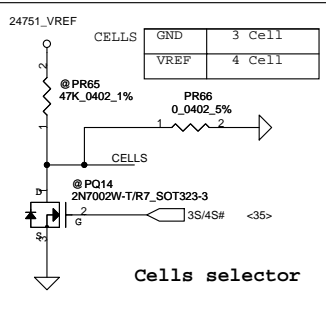
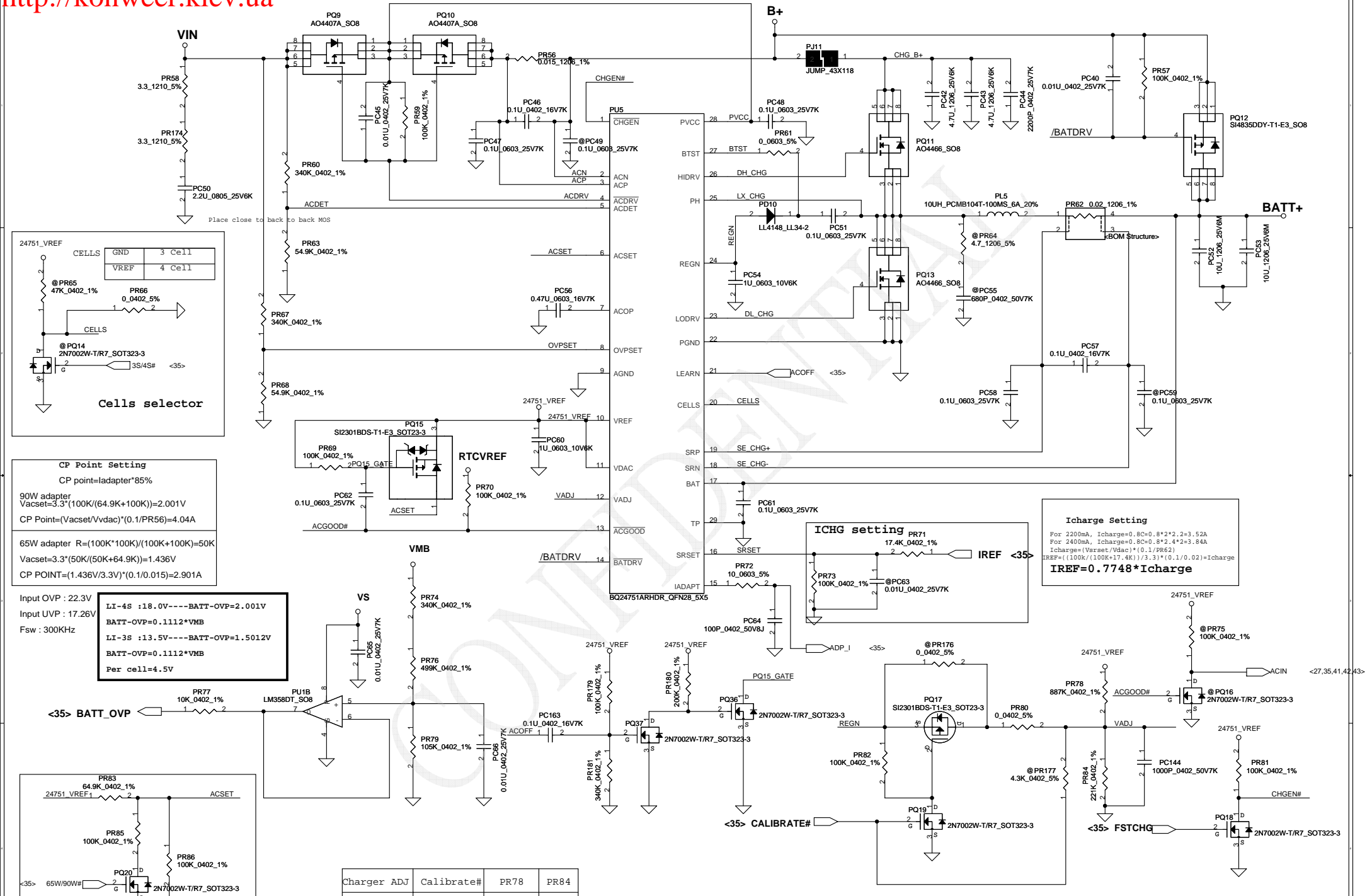
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+3.3VALWP Ipeak=8.444A ; Imax=5.91A
 Choke DCRmax=60m ohm, DCRtyp=54m ohm
 Rds(on)=18m ohm(max) ; Rds(on)=15m ohm(typical)
 Vlimit=(5E-06 * 330K)/10=165mV
 Ilimit=165mV/18m ~ 165mV/15m
 =9.167A ~ 11A
 Iocp=Ilimit+Delta I/2
 =10.134A ~ 11.967A
 Delta I=1.934A (Freq=300KHz)

+5VALWP Ipeak=8.444A ; Imax=5.91A
 Choke DCRmax=60m ohm, DCRtyp=54m ohm
 Rds(on)=18m ohm(max) ; Rds(on)=15m ohm(typical)
 Vlimit=(5E-06 * 330K)/10=165mV
 Ilimit=165mV/18m ~ 165mV/15m
 =9.167A ~ 11A
 Iocp=Ilimit+Delta I/2
 =10.147A ~ 11.980A
 Delta I=1.96A (Freq=400KHz)

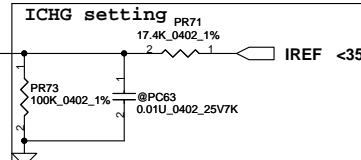
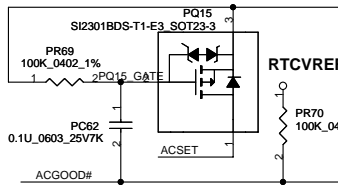
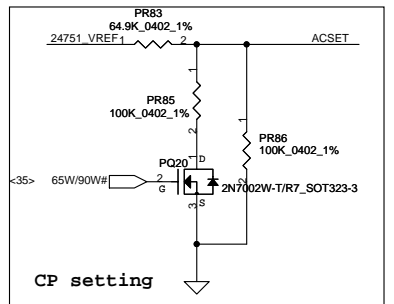
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CP Point Setting
 CP point=ladapter*85%
 90W adapter
 $V_{acset}=3.3 \cdot (100K / (64.9K + 100K)) = 2.001V$
 $CP\ Point = (V_{acset} / V_{vdac}) \cdot (0.1 / PR56) = 4.04A$
 65W adapter $R = (100K \cdot 100K) / (100K + 100K) = 50K$
 $V_{acset} = 3.3 \cdot (50K / (50K + 64.9K)) = 1.436V$
 $CP\ POINT = (1.436V / 3.3V) \cdot (0.1 / 0.015) = 2.901A$

Input OVP : 22.3V
 Input UVP : 17.26V
 Fsw : 300KHz

LI-4S : 18.0V --- BATT-OVP=2.001V
 BATT-OVP=0.1112 * VMB
 LI-3S : 13.5V --- BATT-OVP=1.5012V
 BATT-OVP=0.1112 * VMB
 Per cell=4.5V



Icharge Setting
 For 2200mA, Icharge=0.8C=0.8*2*2.2=3.52A
 For 2400mA, Icharge=0.8C=0.8*2.4*2=3.84A
 $I_{charge} = (V_{acset} / V_{dac}) \cdot (0.1 / PR62)$
 $IREF = ((100K / (100K + 17.4K)) / 3.3) \cdot (0.1 / 0.02) = I_{charge}$
IREF=0.7748 * Icharge

Charger ADJ	Calibrate#	PR78	PR84
4.0V	L	@	@
4.1V	L	887K	221K
4.2V	H	@	@

Security Classification **Compal Secret Data**

Issued Date 2007/09/20 Deciphered Date 2008/09/20

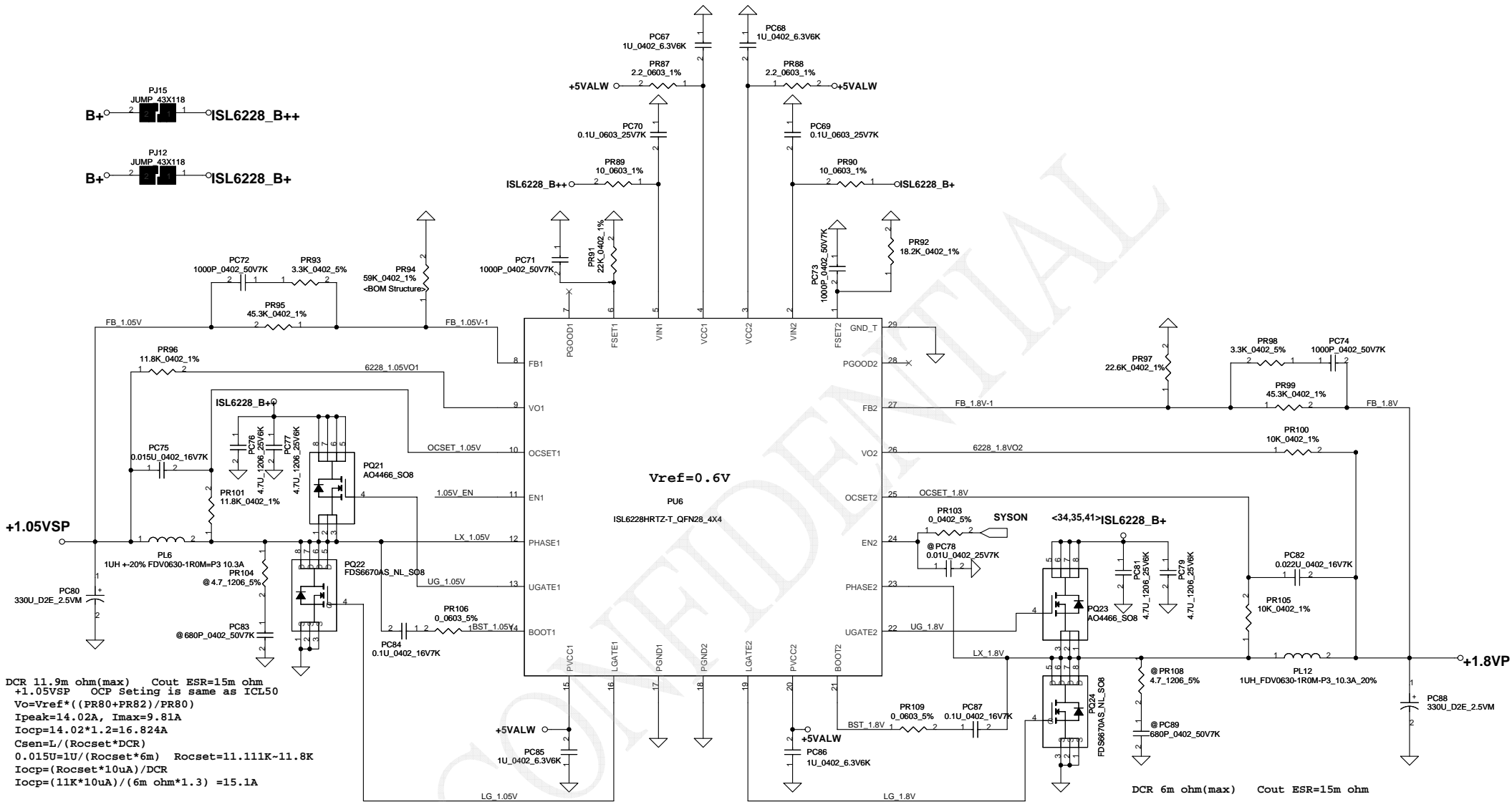
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SCHEMATIC_A4491

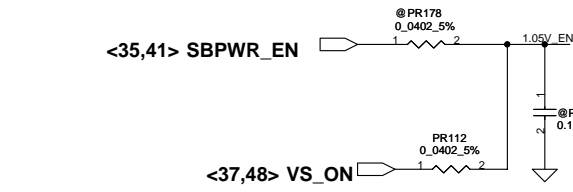
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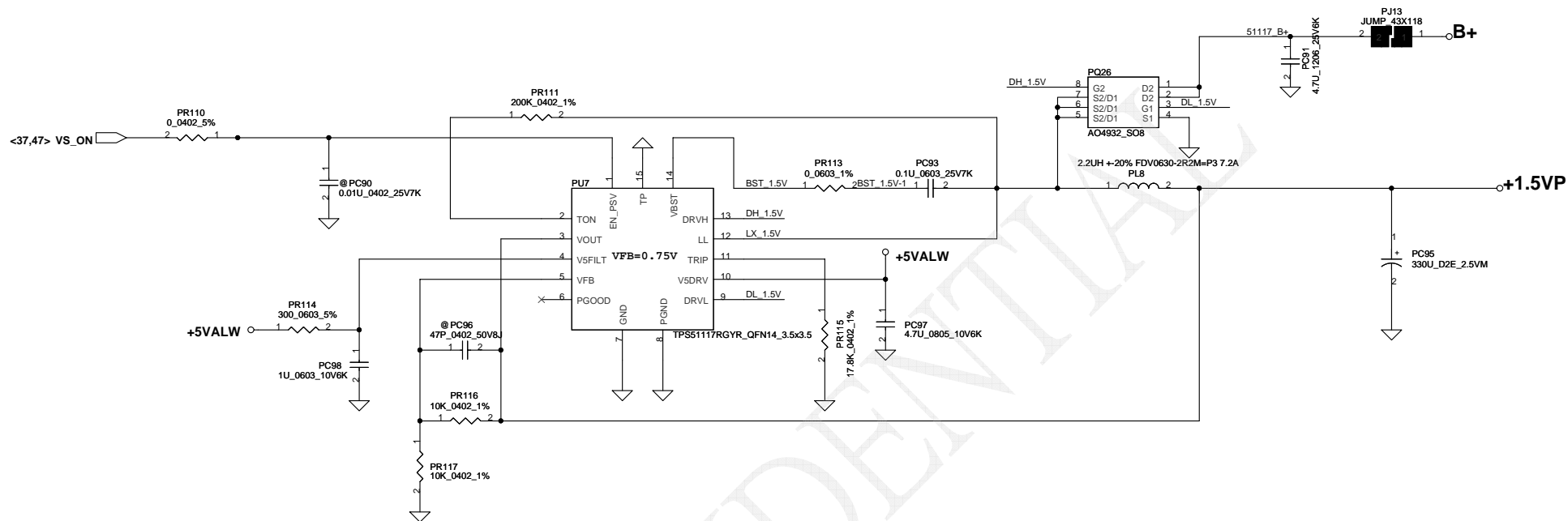


DCR 11.9m ohm(max) Cout ESR=15m ohm
 +1.05VSP OCP Setting is same as ICL50
 $V_o = V_{ref} * ((PR80 + PR82) / PR80)$
 $I_{peak} = 14.02A, I_{max} = 9.81A$
 $I_{ocp} = 14.02 * 1.2 = 16.824A$
 $C_{sen} = L / (Rocset * DCR)$
 $0.015U = 1U / (Rocset * 6m) Rocset = 11.111K - 11.8K$
 $I_{ocp} = (Rocset * 10uA) / DCR$
 $I_{ocp} = (11K * 10uA) / (6m ohm * 1.3) = 15.1A$

DCR 6m ohm(max) Cout ESR=15m ohm
 $V_o = 0.6 * ((PR7 + PR83) / PR83) = 1.8V$
 $1.8VP I_{peak} = 11.93A, I_{max} = 8.351A$
 $C_{sen} = L / (Rocset * DCR) = 1uF / (Rocset * 6m ohm) = 0.022uF$
 $=> Rocset = 7.575K, Choose 10K because of thermal factor$
 $I_{ocp} = (Rocset * 10uA) / DCR = (10K * 10uA) / (0.006 * 1.3) = 12.82A$

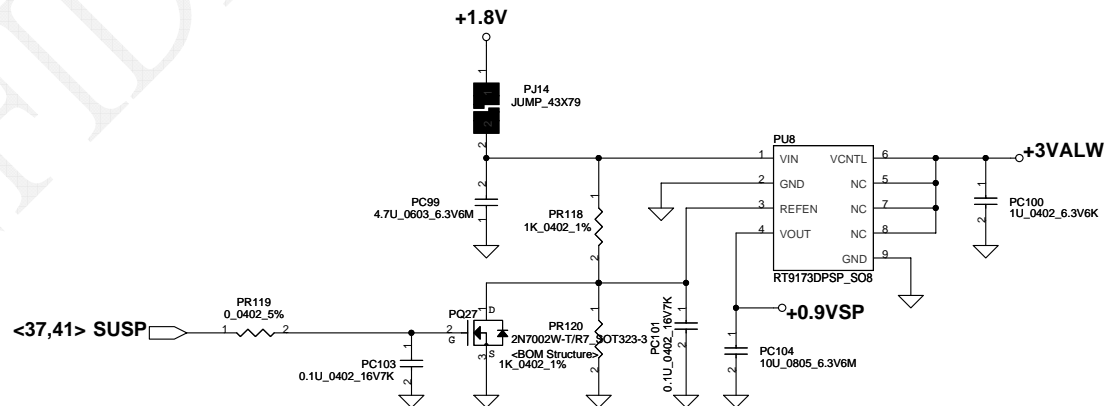


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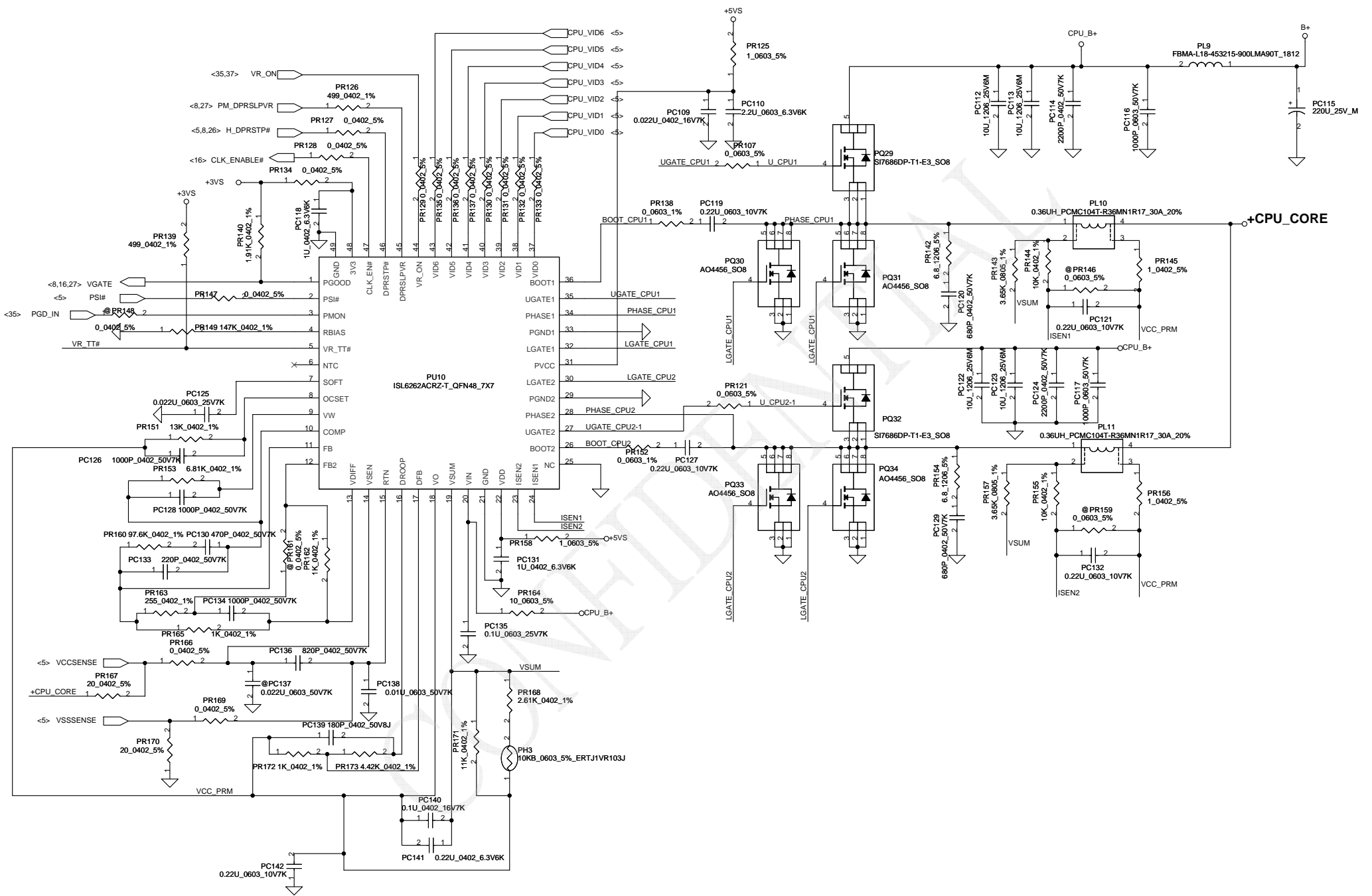


VFB=0.75V
 $V_o = VFB * (1 + PR87 / PR88) = 0.75 * (1 + 4.02K / 10K) = 1.05V$
 Ton=200K
 Fsw=400KHz

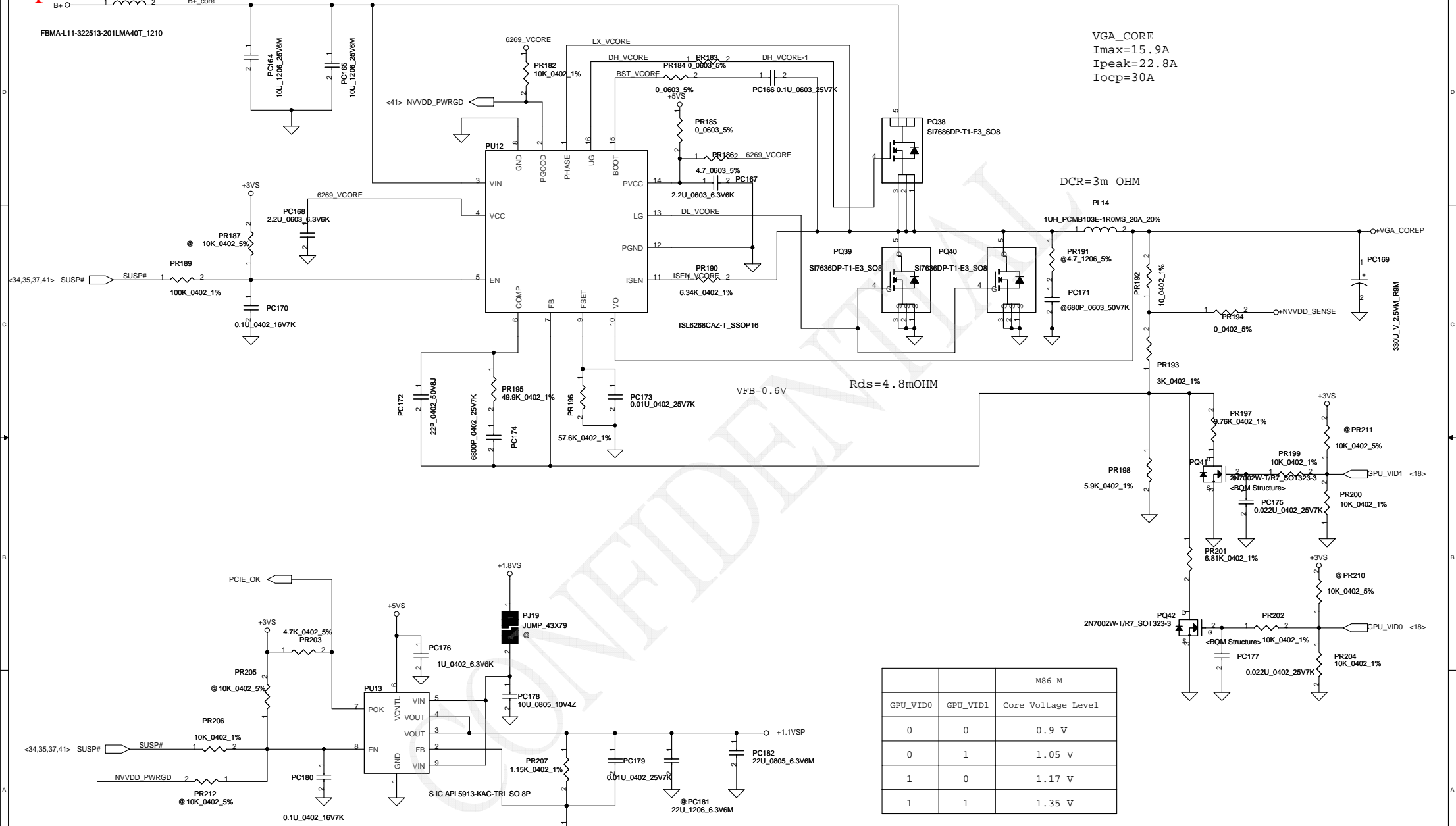
Cout ESR=15m ohm
 Ipeak=14.02A, I_{max}=9.81A
 $\Delta I = ((19 - 1.05) * (1.05 / 19)) / (L * Fsw) = 2.4872A$
 $\Rightarrow 1 / 2 \Delta I = 1.243A$
 $V_{trip} = R_{trip} * I_{0uA} = 17.8K * 10uA = 0.178V$
 $I_{ocpmin} = V_{trip} / R_{dsonmax} * 1.2 + 1.243A = 0.178 / (0.0115 * 1.2) + 1.243 = 12.898A + 1.243A = 14.141A$
 $I_{ocpmax} = (0.178 / (0.009 * 1.1)) + 1.243A = 17.98A + 1.243A = 19.22A$
 $I_{ocp} = 14.141A - 19.22A$



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VGA_CORE
 I_{max}=15.9A
 I_{peak}=22.8A
 I_{ocp}=30A

DCR=3m OHM

VFB=0.6V

R_{ds}=4.8mOHM

		M86-M
GPU_VID0	GPU_VID1	Core Voltage Level
0	0	0.9 V
0	1	1.05 V
1	0	1.17 V
1	1	1.35 V

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Version change list (P.I.R. List)

Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	Date	Phase
1	cpu load line fail	Measure cpu load line can't fit spec	0.2	49	change the resistance value of pr173.from 4.42k to 3.83k	2008/08/08	DVT
2	Change resistance size	EMI request	0.2	49	Change pc116 and pc117 size from 0402 to 0603	2008/08/08	DVT
3	Change p-mos part number	Vender change EOL	0.2	46	PQ12 part number from 4835bdy to 483500y	2008/08/08	DVT
4	Change device size	device too large can't fit layout space	0.2	44-50	PQ4, PQ14, PQ16, PQ18, PQ19, PQ20, PQ27, PQ36, PQ37, PQ41, PQ42 change to sot323-3	2008/08/12	DVT
5	Change resistance value	1.05V tranient fail	0.2	47	PR94 from 60.4k to 59k	2008/08/12	DVT
6	change resistance	for hdmi	0.2	45	pr41 change from 61.3k to 63.4k	2008/08/14	DVT
7							
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A--> B Change List

7/16 -----
 Page 41 Update U61,U62,U63,U65 Change SI4800BDY
 Page 41 Change 910K

Page 41 Update R1405,R1403,R1404 with BOM Structure @
 7/23 -----
 Page 23 Change C1918,C1919,C120 10P
 Page 23 DEL C1915, C1916,C1917 with BOM Structure PM@
 Page 6, Add C416,C425,C426,C427,C428,C429,C430,C431 10U_0805
 Page 12,Change C1501 22U to 220U
 7/30 -----
 Page 36 Add C2071,C2072,C2073,C2074,C2075,C2076,
 C2077,C2078,C2079,C2081,C2082,C2083
 ,C2084,C2085,C2086,C2087,C2088,C2089,
 C2090,C2091,C2092,C2093,C2094,C2095,
 C2096,C2097,C2098
 7/30 -----
 Page 28 DEL R1395,R1397
 Page 28 Change R1394,R1396 with BOM Structure
 8/7 -----
 Page 38 DEL L48
 Page 38 Update R1534 with BOM Structure
 Page 39 Add D63,D64,D65
 Page 39 Update JHP1 PIN6 AND PIN10 to GND
 Page 39 Update JLINE1 PIN6 to GND
 Page 39 Update JM1C1 PIN6 to GND
 8/13 -----
 Page 31 DEL U50
 Page 33 Change JP15 PIN5 (USB20_P5) to PIN6
 Page 33 Change JP15 PIN6 (USB20_N5) to PIN5
 8/14 -----
 Page 37 Add R1776
 Page 37 DEL R1778
 Page 40 DEL H16
 Page 40 Add H34

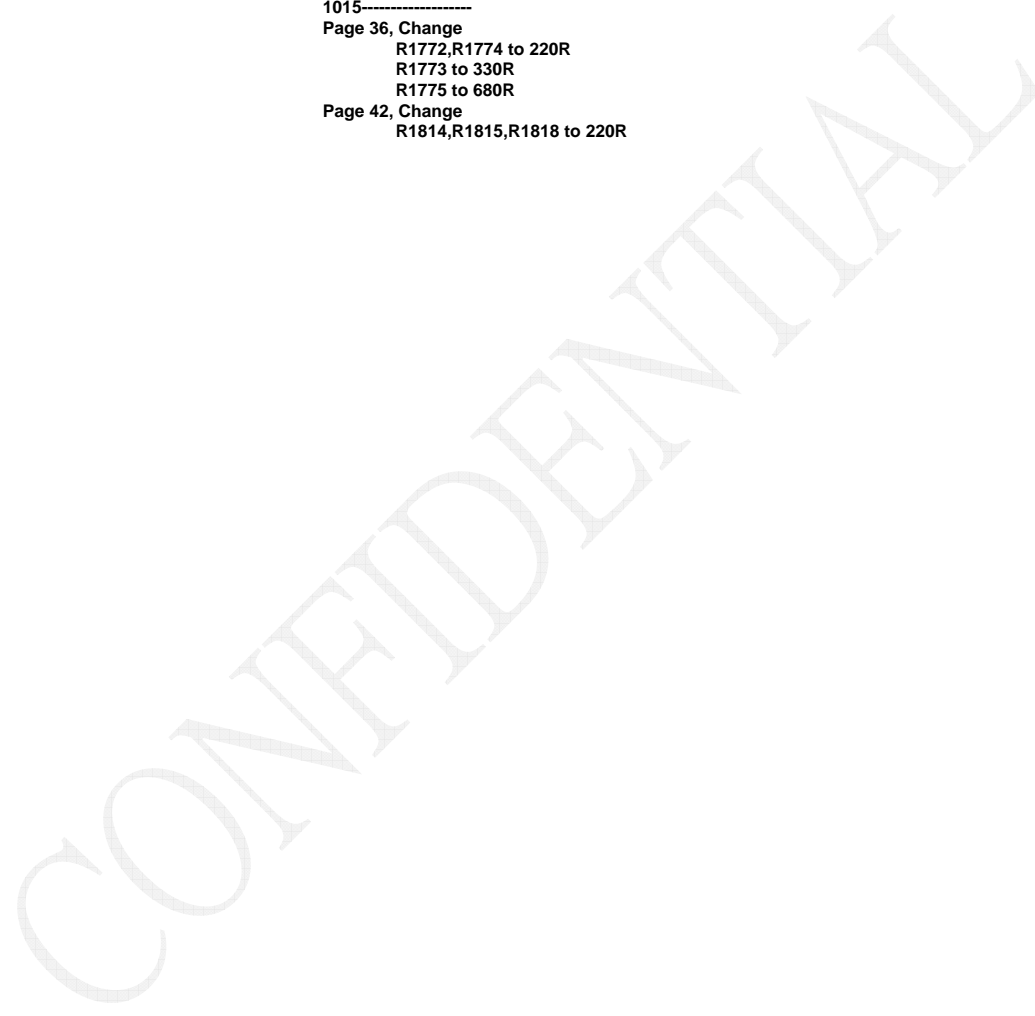
B--> C Change List

0920-----
 Page 6, Change R1678,R1679,R1682,R1683,R1684,R1687,R1689,R1691 to SD034499A80

1009-----
 Page 37,Add
 R1838,R1837 to 10K
 R1836 to 510k
 Q124,Q138 to 2N7002
 D47 to 1SS355

1015-----
 Page 36, Change
 R1772,R1774 to 220R
 R1773 to 330R
 R1775 to 680R

Page 42, Change
 R1814,R1815,R1818 to 220R



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